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Monitoring
Committee
Flow weighting
and regression
output

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SECTION 1.0

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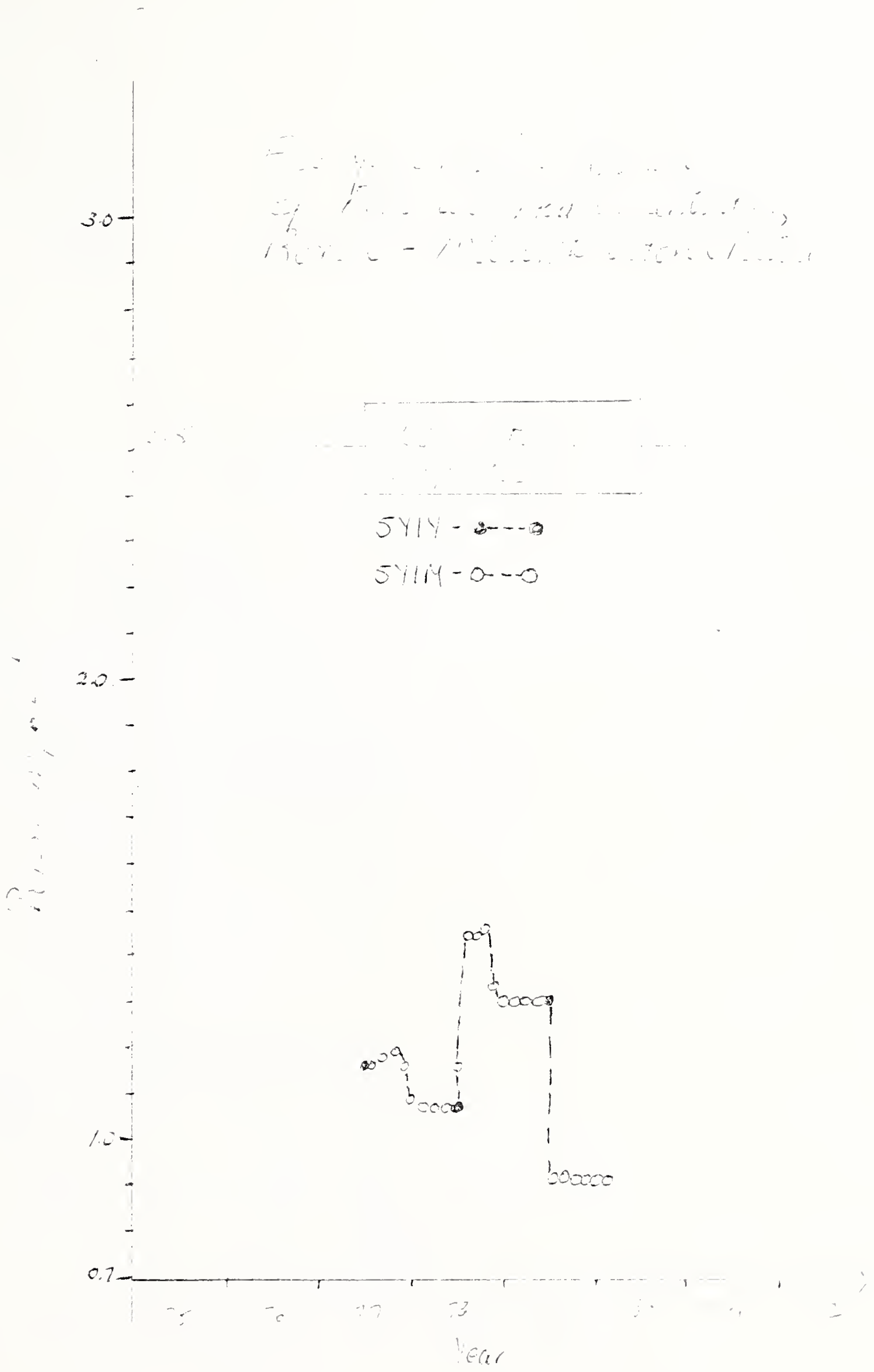

3.0
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5Y1Y
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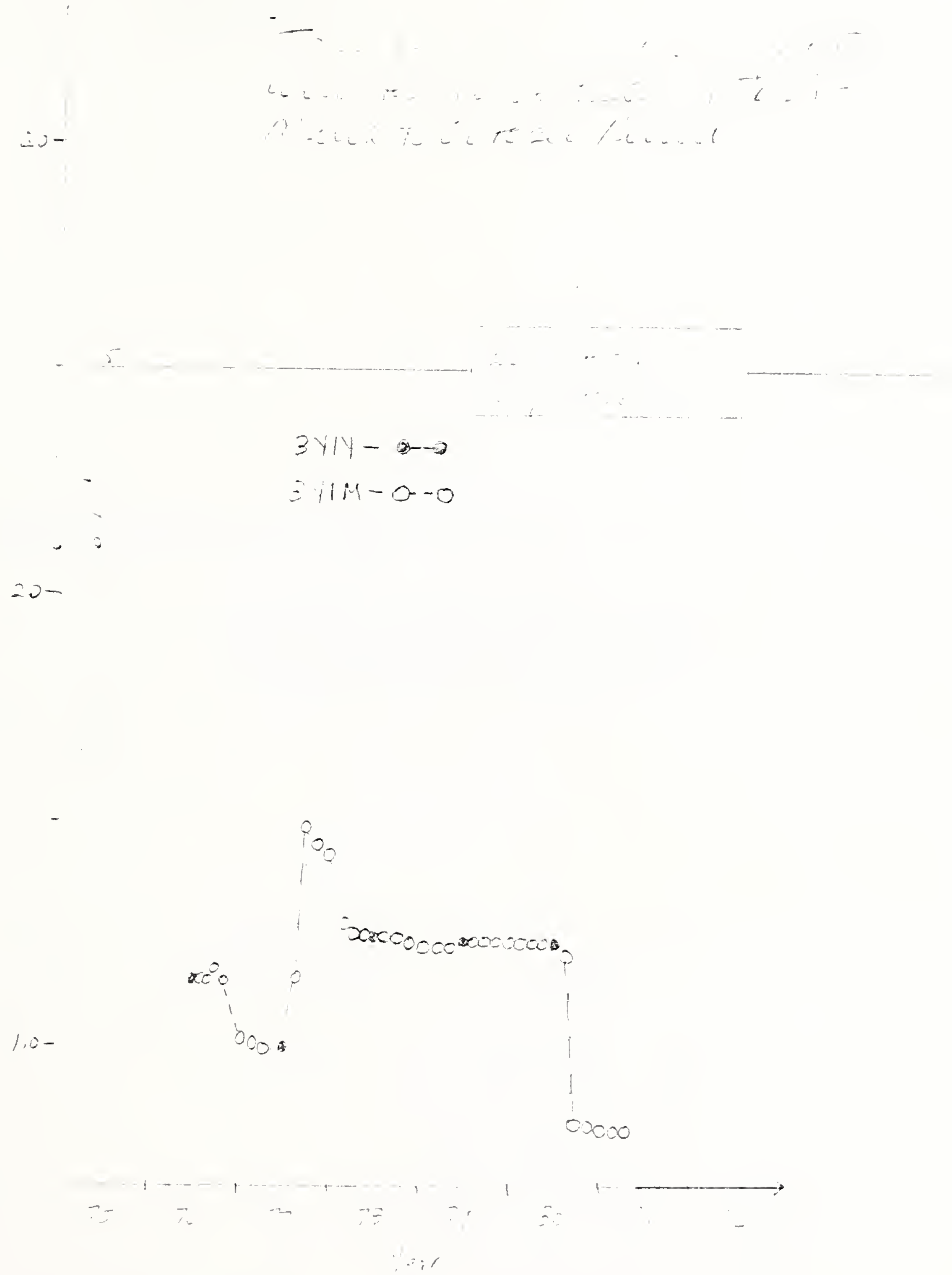
3Y1Y — ●-●
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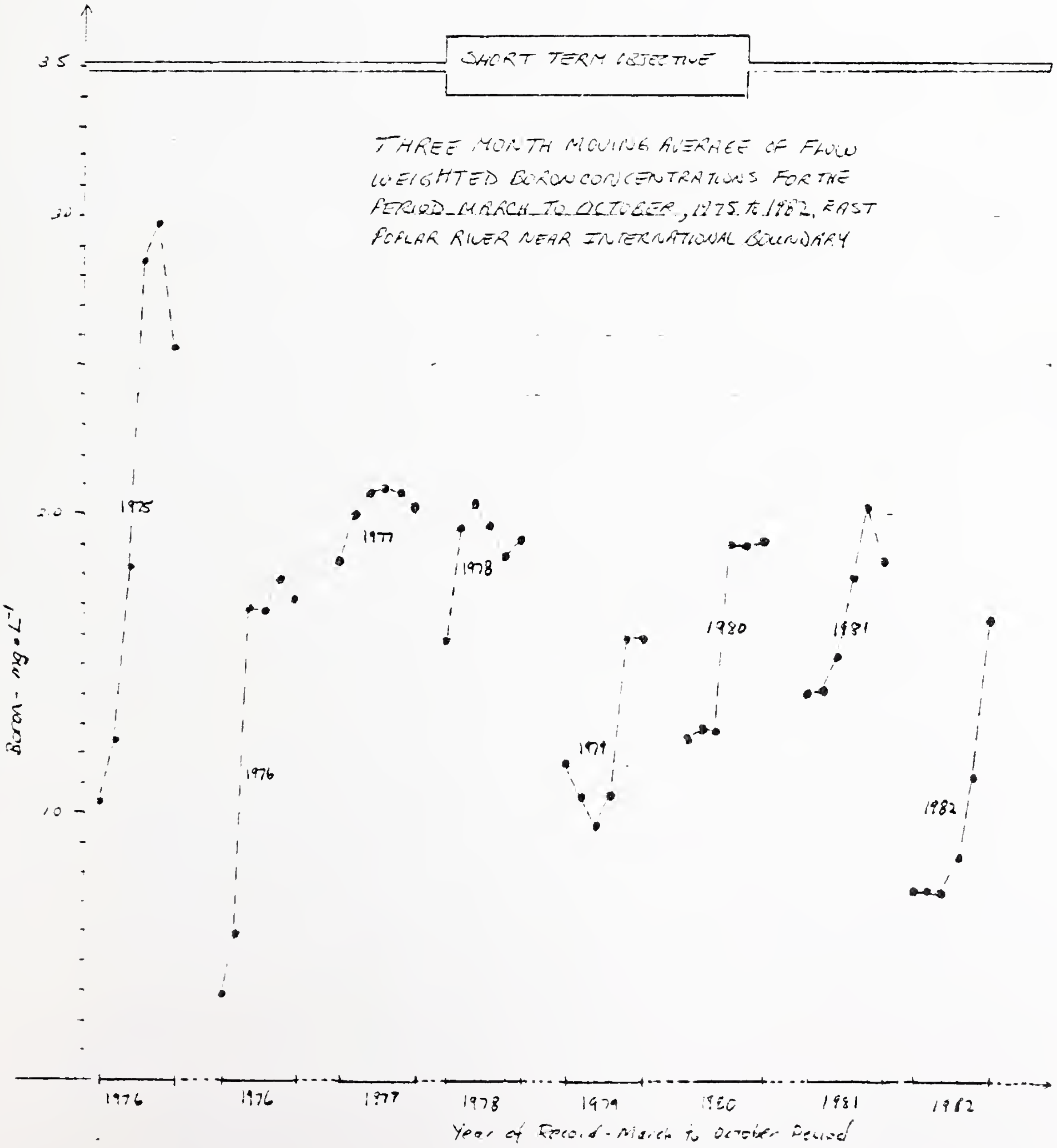

THREE MONTH MOVING AVERAGE OF FLOW WEIGHTED BORON CONCENTRATIONS FOR THE PERIOD MARCH TO OCTOBER, 1975 to 1982, EAST POPLAR RIVER NEAR INTERNATIONAL BOUNDARY

SECTION 2.0

SUMMARY OF FLOW WEIGHTED CONCENTRATIONS

BORON_DQ 7C X 63R SUMMARY OF FLOW WEIGHTED [illegible] 07/01/83 PAGE 1

		1 B	2 Q	3 5Y1Y	4 5Y1M	5 3Y1Y	6 3Y1M	7 3M1M
1.	03/75	1.3	4.9					
2.	04/75	1.1	8.5					1.03
3.	05/75	1.	75.					1.25
4.	06/75	2.3	19.					1.82
5.	07/75	3.1	41.					2.84
6.	08/75	2.79	7.15					2.97
7.	09/75	2.37	6.75					2.56
8.	10/75	1.91	0.66					~~0.452~~
9.	03/76	0.295	88.7					~~0.287~~
10.	04/76	0.279	218.					0.293
11.	05/76	1.9	1.8					0.496
12.	06/76	1.32	54.4			1.16	1.16	1.69
13.	07/76	1.8	173.				1.16	1.68
14.	08/76	1.66	27.				1.16	1.78
15.	09/76	1.99	3.1				1.18	1.71
16.	10/76	1.92	2.3				1.15	~~1.91~~
17.	03/77	1.79	2.25				1.02	~~1.82~~
18.	04/77	1.74	2.45				1.01	1.84
19.	05/77	2.02	2.				0.996	2.
20.	06/77	2.08	7.9	1.17	1.17	1.	1.	2.07
21.	07/77	2.11	1.75		1.17		1.16	2.09
22.	08/77	2.09	1.9		1.18		1.49	2.07
23.	09/77	2.02	2.		1.19		1.45	2.02
24.	10/77	1.95	2.1		1.17		1.43	~~1.55~~
25.	03/78	1.1	4.		1.09		1.28	~~1.52~~
26.	04/78	1.8	2.7		1.08		1.26	1.58
27.	05/78	2.05	2.75		1.08		1.25	1.96
28.	06/78	2.05	2.4	1.08	1.08	1.25	1.25	2.03
29.	07/78	1.96	1.85		1.16		1.25	1.97
30.	08/78	1.9	2.03		1.43		1.25	1.87
31.	09/78	1.8	3.3		1.43		1.24	1.91
32.	10/78	2.05	2.6		1.44		1.23	~~1.51~~
33.	03/79	1.48	72.		1.32		1.23	~~1.22~~
34.	04/79	1.11	188.		1.3		1.23	1.18
35.	05/79	0.875	29.5		1.3		1.23	1.06
36.	06/79	0.98	40.	1.3	1.3	1.24	1.24	0.96
37.	07/79	1.47	3.3		1.3		1.24	1.07
38.	08/79	1.78	3.15		0.911		1.24	1.59
39.	09/79	1.53	4.2		0.906		1.24	1.59
40.	10/79	1.5	4.35		0.9		1.24	~~1.5~~
41.	03/80	1.47	4.05		0.9		1.24	~~1.52~~
42.	04/80	1.55	7.25		0.9		1.24	1.26
43.	05/80	1.09	18.		0.901		1.24	1.29
44.	06/80	1.91	2.85			1.24	1.24	1.28
45.	07/80	1.87	2.75				1.2	1.9
46.	08/80	1.92	2.9				0.815	1.9
47.	09/80	1.92	2.75				0.814	1.91
48.	10/80	1.89	3.1				0.809	1.79
49.	03/81	1.59	3.45				0.809	1.56
50.	04/81	1.42	7.85				0.809	1.4
51.	05/81	1.31	9.8				0.809	1.41
52.	06/81	1.56	6.6					1.52

```
BORON_DQ 7C X 63R                                              07/01/83 PAGE 2

           1 B    2 Q      3 5Y1Y  4 5Y1M  5 3Y1Y  6 3Y1M  7 3M1M

-----------------------------------------------------------------
53. 07/81  2.31      2.25                                   1.79
54. 08/81  1.95      2.4                                    2.02
55. 09/81  1.8       2.2                                    1.84
56. 10/81  1.77      2.5                                    1.44
57. 03/82  1.39     31.7                                    0.747
58. 04/82  0.725  1040.                                     0.747
59. 05/82  0.807    45.3                                    0.73
60. 06/82  0.882    12.7                                    0.864
61. 07/82  1.47      3.9                                    1.12
62. 08/82  1.66      2.9                                    1.65
-----------------------------------------------------------------
63. 09/82  1.87      3.1
```

```
          1 B      2 MEANQ 3 5Y1Y  4 5Y1M  5 3Y1Y  6 3Y1M  7 3M1M

----------------------------------------------------------------
  1. 03/75  1.3      0.261
  2. 04/75  1.1      12.1                                    1.09
  3. 05/75  1.       1.79                                    1.18
  4. 06/75  2.3      1.19                                    2.
  5. 07/75  3.1      1.29                                    2.72
  6. 08/75  2.79     0.258                                   3.
  7. 09/75  2.37     0.122                                   2.61
  8. 10/75  1.91     0.022                                   0.364
  9. 03/76  0.295    4.06                                    0.289
 10. 04/76  0.279    5.73                                    0.409
----------------------------------------------------------------
 11. 05/76  1.9      0.812                                   0.736
 12. 06/76  1.32     2.86                    1.14    1.14    1.61
 13. 07/76  1.8      3.08                            1.14    1.57
 14. 08/76  1.66     0.406                           1.16    1.79
 15. 09/76  1.99     0.087                           1.18    1.75
 16. 10/76  1.92     0.076                           1.12    1.91
 17. 03/77  1.79     0.074                           0.989   1.82
 18. 04/77  1.74     0.067                           0.967   1.96
 19. 05/77  2.02     0.484                           0.961   2.03
 20. 06/77  2.08     0.393   1.16    1.16    0.964   0.964   2.05
----------------------------------------------------------------
 21. 07/77  2.11     0.051           1.16            1.18    2.08
 22. 08/77  2.09     0.056           1.18            1.51    2.07
 23. 09/77  2.02     0.057           1.19            1.44    2.02
 24. 10/77  1.95     0.059           1.15            1.44    1.57
 25. 03/78  1.1      0.101           1.06            1.33    1.54
 26. 04/78  1.8      0.077           1.05            1.32    1.61
 27. 05/78  2.05     0.084           1.04            1.32    1.98
 28. 06/78  2.05     0.106   1.04    1.04    1.32    1.32    2.02
 29. 07/78  1.96     0.076           1.17            1.32    1.99
 30. 08/78  1.9      0.056           1.45            1.32    1.89
----------------------------------------------------------------
 31. 09/78  1.8      0.066           1.43            1.28    1.92
 32. 10/78  2.05     0.067           1.45            1.25    1.51
 33. 03/79  1.48     1.68            1.37            1.25    1.23
 34. 04/79  1.11     3.98            1.36            1.25    1.16
 35. 05/79  0.875    1.15            1.36            1.25    1.05
 36. 06/79  0.98     0.658   1.36    1.36    1.25    1.25    0.964
 37. 07/79  1.47     0.181           1.36            1.26    1.15
 38. 08/79  1.78     0.093           1.09            1.25    1.56
 39. 09/79  1.53     0.116           1.06            1.25    1.59
 40. 10/79  1.5      0.131           1.03            1.25    1.5
----------------------------------------------------------------
 41. 03/80  1.47     0.122           1.03            1.25    1.51
 42. 04/80  1.55     0.205           1.03            1.25    1.29
 43. 05/80  1.09     0.372           1.03            1.25    1.33
 44. 06/80  1.91     0.077                   1.25    1.25    1.32
 45. 07/80  1.87     0.075                           1.21    1.9
 46. 08/80  1.92     0.079                           0.92    1.9
 47. 09/80  1.92     0.078                           0.916   1.91
 48. 10/80  1.89     0.08                            0.911   1.79
 49. 03/81  1.59     0.092                           0.908   1.6
 50. 04/81  1.42     0.129                           0.907   1.4
----------------------------------------------------------------
 51. 05/81  1.31     0.218                           0.907   1.42
 52. 06/81  1.56     0.174                                   1.55
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BORON_MQ 7C X 63R                                            07/01/83 PAGE 2

           1 B      2 MEANQ  3 5Y1Y  4 5Y1M  5 3Y1Y  6 3Y1M  7 3M1M

------------------------------------------------------------------
53. 07/81  2.31       0.064                                      1.8
54. 08/81  1.95       0.068                                      2.02
55. 09/81  1.8        0.065                                      1.84
56. 10/81  1.77       0.075                                      1.52
57. 03/82  1.39       0.286                                      0.755
58. 04/82  0.725      8.67                                       0.752
59. 05/82  0.807      0.988                                      0.742
60. 06/82  0.882      0.566                                      0.881
61. 07/82  1.47       0.124                                      1.06
62. 08/82  1.66       0.082                                      1.64
------------------------------------------------------------------
63. 09/82  1.87       0.082
```

		1 TDS	2 Q	3 5Y1Y	4 5Y1M	5 3Y1Y	6 3Y1M	7 3M1M
1.	03/75	910	4.9					
2.	04/75	689	8.5					721
3.	05/75	712	75.					795
4.	06/75	1170	19.					1010
5.	07/75	1480	41.					1380
6.	08/75	1360	7.15					1420
7.	09/75	1130	6.75					1230
8.	10/75	936	0.66					257
9.	03/76	186	88.7					191
10.	04/76	191	218.					194
11.	05/76	875	1.8					204
12.	06/76	815	2.8			613	613	913
13.	07/76	915	160.				610	909
14.	08/76	880	27.				610	911
15.	09/76	969	3.1				599	892
16.	10/76	933	2.3				582	934
17.	03/77	887	2.25				517	876
18.	04/77	811	2.45				508	870
19.	05/77	923	2.				503	956
20.	06/77	1010	7.9	626	626	504	504	973
21.	07/77	861	1.75		626		594	963
22.	08/77	859	1.9		626		781	867
23.	09/77	881	2.		621		766	853
24.	10/77	821	2.1		611		746	657
25.	03/78	474	4.35		574		680	673
26.	04/78	879	2.7		569		667	717
27.	05/78	943	2.75		566		666	926
28.	06/78	958	2.4	568	568	667	667	958
29.	07/78	980	1.85		609		667	946
30.	08/78	902	2.03		753		668	952
31.	09/78	967	3.3		753		667	949
32.	10/78	962	2.6		753		662	790
33.	03/79	776	72.		702		663	670
34.	04/79	625	188.		693		664	651
35.	05/79	513	29.5		692		665	590
36.	06/79	485	40.	692	692	667	667	509
37.	07/79	754	3.3		694		671	526
38.	08/79	805	3.15		533		672	801
39.	09/79	835	4.2		531		672	829
40.	10/79	841	4.35		529		673	845
41.	03/80	859	4.05		529		673	809
42.	04/80	762	7.25		529		674	720
43.	05/80	672	18.		~~[illegible]~~ 530		673	724
44.	06/80	956	2.85			672	672	735
45.	07/80	917	2.75				658	940
46.	08/80	945	2.9				494	939
47.	09/80	955	2.75				493	971
48.	10/80	1010	3.1				493	940
49.	03/81	864	3.45				494	871
50.	04/81	819	7.85				494	787
51.	05/81	734	9.8				~~520~~ 494	792
52.	06/81	846	6.6					800

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              1 TDS   2 Q        3 5Y1Y   4 5Y1M   5 3Y1Y   6 3Y1M   7 3M1M

------------------------------------------------------------------------------
53. 07/81     953      2.25                                             886
54. 08/81     933      2.4                                              937
55. 09/81     924      2.2                                              913
56. 10/81     885      2.5                                              759
57. 03/82     738     31.7                                              466
58. 04/82     457   1040.                                               466
59. 05/82     478     45.3                                              458
60. 06/82     511     12.7                                              504
61. 07/82     785      3.9                                              629
62. 08/82     938      2.9                                           ~~3280~~
                                                                        905
------------------------------------------------------------------------------
63. 09/82   ~~6083~~  ~~5.9~~
              1030     2,95
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		1 TDS	2 MEANQ	3 5Y1Y	4 5Y1M	5 3Y1Y	6 3Y1M	7 3M1M
1.	03/75	910	0.261					
2.	04/75	689	12.1					696
3.	05/75	712	1.79					730
4.	06/75	1170	1.19					1070
5.	07/75	1480	1.29					1330
6.	08/75	1360	0.258					1440
7.	09/75	1130	0.122					1270
8.	10/75	936	0.022					217
9.	03/76	186	4.06					191
10.	04/76	191	5.73					241
11.	05/76	875	0.812					440
12.	06/76	815	2.86			651	651	868
13.	07/76	915	3.08				649	868
14.	08/76	880	0.406				628	912
15.	09/76	969	0.087				623	901
16.	10/76	933	0.076				592	932
17.	03/77	887	0.074				534	880
18.	04/77	811	0.067				524	907
19.	05/77	923	0.484				522	951
20.	06/77	1010	0.393	652	652	523	523	956
21.	07/77	861	0.051		651		631	978
22.	08/77	859	0.056		638		799	867
23.	09/77	881	0.057		634		773	853
24.	10/77	821	0.059		613		749	675
25.	03/78	474	0.101		574		699	692
26.	04/78	879	0.077		568		692	743
27.	05/78	943	0.084		567		692	930
28.	06/78	958	0.106	568	568	692	692	960
29.	07/78	980	0.076		633		692	952
30.	08/78	902	0.056		771		693	954
31.	09/78	967	0.066		766		681	946
32.	10/78	962	0.067		758		670	790
33.	03/79	776	1.68		719		671	673
34.	04/79	625	3.98		715		672	643
35.	05/79	513	1.15		714		673	587
36.	06/79	485	0.658	714	714	675	675	526
37.	07/79	754	0.181		713		679	569
38.	08/79	805	0.093		605		679	790
39.	09/79	835	0.116		592		678	829
40.	10/79	841	0.131		582		678	845
41.	03/80	859	0.122		583		677	810
42.	04/80	762	0.205		583		678	731
43.	05/80	672	0.372		~~654~~ 584		677	734
44.	06/80	956	0.077			677	677	749
45.	07/80	917	0.075				660	940
46.	08/80	945	0.079				538	939
47.	09/80	955	0.078				535	970
48.	10/80	1010	0.08				537	939
49.	03/81	864	0.092				536	884
50.	04/81	819	0.129				537	786
51.	05/81	734	0.218				~~569~~ 537	792
52.	06/81	846	0.174					807

```
              1 TDS  2 MEANQ  3 5Y1Y  4 5Y1M  5 3Y1Y  6 3Y1M  7 3M1M

-------------------------------------------------------------------
53. 07/81     953     0.064                                       888
54. 08/81     933     0.068                                       937
55. 09/81     924     0.065                                       913
56. 10/81     885     0.075                                       792
57. 03/82     738     0.286                                       469
58. 04/82     457     8.67                                        467
59. 05/82     478     0.988                                       462
60. 06/82     511     0.566                                       512
61. 07/82     785     0.124                                       600
62. 08/82     938     0.082                                    ~~9340~~
-----------------------------------------------------------------893--
63. 09/82  ~~6083~~   0.082
             1030
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COND_DQ 7C X 62R                                                    07/01/83 PAGE 1

              1 COND  2 Q       3 5Y1Y  4 5Y1M  5 3Y1Y  6 3Y1M  7 3M1M

-----------------------------------------------------------------------
  1. 03/75    1440     4.9
  2. 04/75    1180     8.5                                          1220
  3. 05/75    1210    75.                                           1330
  4. 06/75    1850    19.                                           1630
  5. 07/75    2300    41.                                           2140
  6. 08/75    1990     7.15                                         2180
  7. 09/75    1670     6.75                                         1820
  8. 10/75    1480     0.66                                          415
  9. 03/76     312    88.7                                           323
 10. 04/76     324   218.                                            327
-----------------------------------------------------------------------
 11. 05/76    1390     1.8                                           513
 12. 06/76    1240    54.4                          987      987    1340
 13. 07/76    1380   160.                                    982    1350
 14. 08/76    1360    27.                                    981    1380
 15. 09/76    1460     3.1                                   957    1380
 16. 10/76    1440     2.3                                   932    1430
 17. 03/77    1370     2.25                                  841    1370
 18. 04/77    1300     2.45                                  829    1360
 19. 05/77    1420     2.                                    823    1580
 20. 06/77    1710     7.9       1000     1000      825      825    1600
-----------------------------------------------------------------------
 21. 07/77    1300     1.75               1000               958    1600
 22. 08/77    1440     1.9                1000              1220    1390
 23. 09/77    1420     2.                  987              1200    1390
 24. 10/77    1314     2.1                 972              1160    1040
 25. 03/78     738     4.35                919              1070    1040
 26. 04/78    1320     2.7                 912              1060    1090
 27. 05/78    1430     2.75                909              1060    1380
 28. 06/78    1380     2.4        910      910     1060     1060    1400
 29. 07/78    1380     1.85                971              1060    1390
 30. 08/78    1420     2.03               1180              1060    1400
-----------------------------------------------------------------------
 31. 09/78    1400     3.3                1180              1060    1430
 32. 10/78    1470     2.6                1170              1050    1280
 33. 03/79    1270    72.                 1110              1050    1060
 34. 04/79     980   188.                 1100              1050    1040
 35. 05/79     832    29.5                1090              1050     927
 36. 06/79     750    40.        1090     1090     1050     1050     805
 37. 07/79    1230     3.3                1100              1060     825
 38. 08/79    1360     3.15                828              1060    1270
 39. 09/79    1230     4.2                 824              1060    1290
 40. 10/79    1310     4.35                821              1070    1290
-----------------------------------------------------------------------
 41. 03/80    1340     4.05                821              1070    1270
 42. 04/80    1210     7.25            ~~844~~              1070    1150
                                           821
 43. 05/80    1086    18.                                   1070    1160
 44. 06/80    1510     2.85                         1070     1070    1180
 45. 07/80    1440     2.75                                  1030    1470
 46. 08/80    1470     2.9                                   772    1430
 47. 09/80    1390     2.75                                  769    1470
 48. 10/80    1540     3.1                                   770    1440
 49. 03/81    1390     3.45                                  770    1370
 50. 04/81    1300     7.85                              ~~779~~    1260
                                                             770
-----------------------------------------------------------------------
 51. 05/81    1184     9.8                                          1260
 52. 06/81    1320     6.6                                          1260
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           1 COND  2 Q       3 5Y1Y  4 5Y1M  5 3Y1Y  6 3Y1M  7 3M1M

-------------------------------------------------------------------
53. 07/81    1450     2.25                                     1380
54. 08/81    1480     2.4                                      1430
55. 09/81    1350     2.2                                      1420
56. 10/81    1410     2.5                                      1190
57. 03/82    1150    20.6                                       735
58. 04/82     727  1290.                                        733
59. 05/82     722    42.5                                       728
60. 06/82     863     7.1                                       767
61. 07/82    1060     4.2    -                            ~~[illegible]~~
62. 08/82    ~~[illegible]~~     ~~5.9~~                                    1030
             1390     2.95
-------------------------------------------------------------------
```

COND_MQ 7C X 62R

		1 COND	2 MEANQ	3 5Y1Y	4 5Y1M	5 3Y1Y	6 3Y1M	7 3M1M
1.	03/75	1440	0.261					
2.	04/75	1180	12.1					1190
3.	05/75	1210	1.79					1240
4.	06/75	1850	1.19					1720
5.	07/75	2300	1.29					2080
6.	08/75	1990	0.258					2210
7.	09/75	1670	0.122					1860
8.	10/75	1480	0.022					358
9.	03/76	312	4.06					322
10.	04/76	324	5.73					401
11.	05/76	1390	0.812					695
12.	06/76	1240	2.86			1060	1060	1320
13.	07/76	1380	3.08				1050	1320
14.	08/76	1360	0.406				989	1380
15.	09/76	1460	0.087				973	1390
16.	10/76	1440	0.076				923	1430
17.	03/77	1370	0.074				833	1370
18.	04/77	1300	0.067				819	1400
19.	05/77	1420	0.484				815	1530
20.	06/77	1710	0.393	1050	1050	817	817	1540
21.	07/77	1300	0.051		1050		986	1640
22.	08/77	1440	0.056		1010		1240	1390
23.	09/77	1420	0.057		995		1200	1390
24.	10/77	1314	0.059		961		1170	1070
25.	03/78	738	0.101		901		1110	1070
26.	04/78	1320	0.077		893		1100	1130
27.	05/78	1430	0.084		891		1100	1380
28.	06/78	1380	0.106	892	892	1100	1100	1400
29.	07/78	1380	0.076		992		1100	1390
30.	08/78	1420	0.056		1200		1100	1400
31.	09/78	1400	0.066		1190		1080	1430
32.	10/78	1470	0.067		1190		1060	1280
33.	03/79	1270	1.68		1140		1060	1070
34.	04/79	980	3.98		1130		1060	1030
35.	05/79	832	1.15		1130		1060	924
36.	06/79	750	0.658	1130	1130	1070	1070	841
37.	07/79	1230	0.181		1130		1070	904
38.	08/79	1360	0.093		960		1070	1260
39.	09/79	1230	0.116		938		1070	1300
40.	10/79	1310	0.131		922		1070	1290
41.	03/80	1340	0.122		922		1070	1270
42.	04/80	1210	0.205		~~948~~ 922		1080	1170
43.	05/80	1086	0.372				1070	1170
44.	06/80	1510	0.077			1070	1070	1200
45.	07/80	1440	0.075				1040	1470
46.	08/80	1470	0.079				853	1430
47.	09/80	1390	0.078				845	1470
48.	10/80	1540	0.08				850	1440
49.	03/81	1390	0.092				847	1390
50.	04/81	1300	0.129				~~[illegible]~~ 847	1260
51.	05/81	1184	0.218					1260
52.	06/81	1320	0.174					1270

```
COND_MQ 7C X 62R                                                    07/01/83 PAGE 2

            1 COND  2 MEANQ  3 5Y1Y  4 5Y1M  5 3Y1Y  6 3Y1M  7 3M1M

------------------------------------------------------------------
53. 07/81     1450    0.064                                   1380
54. 08/81     1480    0.068                                   1430
55. 09/81     1350    0.065                                   1410
56. 10/81     1410    0.075                                   1230
57. 03/82     1150    0.286                                    746
58. 04/82      727    8.67                                     739
59. 05/82      722    0.988                                    734
60. 06/82      863    0.566                                    795
61. 07/82     1060    0.124                                   ~~1680~~
62. 08/82     ~~8224~~    0.082                                    951
              1390
------------------------------------------------------------------
```

SECTION 3.0

RAW DATA

```
POPLAR RC Y 1975                                                         05/01/87 PAGE 1

           1 DATE     5 S    4 TDS   7 Q        8 COND

 ----------------------------------------------------------
  1. 501  10/10/74  1.6      909      4.7        1490
  2. 502  04/03/75  1.3      910      4.9        1440
  3. 503  13/04/75  1.1      629      2.5        1130
  4. 504  22/05/75  1.       712     75.         1210
  5. 505  17/06/75  2.3     1170     19.         1850
  6. 506  17/07/75  3.1     1480     41.         2300
  7. 001  06/08/75  3.      1424      8.4        2052
  8. 507  14/08/75  2.5     1280      5.9        1900
  9. 002  02/09/75  2.7     1183      8.5        1774
 10. 508  16/09/75  1.91    1040      5.         1490
 ----------------------------------------------------------
 11. 003  01/10/75  2.04     935      0.69       1395
 12. 509. 06/10/75  1.8      936      0.7        1550
 13. 004  03/11/75  2.1      912      0.5        1390
 14. 510  06/11/75  2.3     1190      0.67       1450
 15. 005  02/12/75  2.45    1147      0.7        1430
 16. 511  19/12/75  2.3     1190      0.73       1850
 17. 006  06/01/76  2.35    1054      0.59       1541
 18. 007  03/02/76  1.62     806      3.9        1230
 19. 513  18/02/76  1.7      901      0.69       1420
 20. 008  03/03/76  1.31     737      9.2        1109
 ----------------------------------------------------------
 21. 514  18/03/76  0.12      97     53.          171
 22. 009  22/03/76  0.3      197    205.          316
 23. 010  02/04/76  0.29     188    198.          304
 24. 515  06/04/76  0.27     194    238.          340
 25. 516  20/05/76  1.9      875      1.9        1390
 26. 011  01/06/76  1.94     815      2.8        1255
 27. 517  16/06/76  1.3             104.         1240
 28. 012  06/07/76           867    146.         1319
 29. 518  08/07/76  1.8      754    173.         1430
 30. 013  04/08/76  1.72     870     27.         1359
 ----------------------------------------------------------
 31. 519  04/08/76  1.6      991     27.         1360
 32. 014  09/09/76  2.07     942      3.2        1446
 33. 520  09/09/76  1.9      997      3.         1490
 34. 015  04/10/76  2.06     931      3.2        1433
 35. 521  06/10/76  1.8      934      3.         1460
 36. 512  20/10/76  1.8      997      2.7        1400
 37. 016  01/11/76  2.1      793      2.1        1700
 38. 522  10/11/76  1.9      997      1.9        1430
 39. 017  06/12/76  2.                1.6        1443
 40. 523  13/12/76  1.7      919      1.8        1350
 ----------------------------------------------------------
 41. 018  05/01/77  2.04     935      1.7        1434
 42. 524  19/01/77  1.9      959      1.8        1430
 43. 019  02/02/77  1.8      921      3.5        1390
 44. 525  24/02/77  1.74     925      2.7        1390
 45. 020  01/03/77  1.9      903      2.1        1390
 46. 526  22/03/77  1.7      873      2.6        1360
 47. 021  05/04/77  1.49     743      2.5        1250
 48. 527  20/04/77  1.8      949      2.4        1350
 49. 022  02/05/77  2.05     895      1.9        1390
 50. 528  10/05/77  2        949      2.1        1450
 ----------------------------------------------------------
 51. 023  07/06/77  2.1      977     13.         1725
 52. 529  09/06/77  2.      1060      2.9        1620
```

```
              1 DATE     5 B    6 TDS   7 Q        8 COND

 ------------------------------------------------------------------
  53.  530   15/07/77   1.9       933       1.7          1340
  54.  025   02/08/77   2.        837       2.           1323
  55.  531   17/08/77   2.2       988       1.9          1470
  56.  026   07/09/77   2.        866       2.1          1321
  57.  532   15/09/77   2.2       999       1.6          1420
  58.  533   20/09/77   1.9       883       2.3          1360
  59.  027   24/10/77   1.95      821       2.1          1314
  60.  028   08/11/77   1.88      850       2.2          1371
  61.  534   10/11/77   2.        996       2.           1440
  62.  029   08/12/77   2.1       830       1.9          1527
 ------------------------------------------------------------------
  63.  535   13/12/77   1.9       949       2.1          1370
  64.  024   07/07/77   2.3       997       1.8          1378
  65.  536   11/01/78   1.9       963       1.9          1420
  66.  030   23/01/78   1.6       845       1.8          1346
  67.  537   14/02/78   1.8       890       1.5          1350
  68.  031   17/02/78   1.7       831       1.5          1329
  69.  538   19/02/78   1.8       931       1.5          1490
  70.  539   20/02/78                       1.5
  71.  032   13/03/78             346       4.7           554
  72.  540   29/03/78   1.1       624       4.            955
 ------------------------------------------------------------------
  73.  033   13/04/78   1.8       828       2.57         1290
  74.  541   19/04/78   1.9       924       2.8          1350
  75.  034   03/05/78   2.1       923       2.3          1370
  76.  542   25/05/78   2.        964       2.7          1480
  77.  035   09/06/78   2.1       933       2.4          1379
  78.  543   15/06/78   2.        982       2.4          1390
  79.  036   17/07/78   2.       1001       2.4          1400
  80.  544   20/07/78   1.9       940       1.7          1340
  81.  037   02/08/78   1.9       891       2.1          1420
  82.  586   17/08/78   2.        839       2.1          1390
 ------------------------------------------------------------------
  83.  038   30/08/78   1.9       928       1.9          1460
  84.  587   20/09/78   1.8       947       3.3          1400
  85.  039   04/10/78   2.2       917       2.6          1477
  86.  545   24/10/78   1.9      1010       2.6          1470
  87.  040   08/11/78   1.95      975       2.4          1470
  88.  546   16/11/78   2.1      1120       2.4          1630
  89.  041   03/12/78   2.25     1119       1.9          1650
  90.  547   14/12/78   1.9      1040       3.           1480
  91.  042   09/01/79   1.9      1077       2.2          1533
  92.  548   25/01/79   1.9      1040       3.1          1480
 ------------------------------------------------------------------
  93.  043   26/02/79   1.85      877       2.           1520
  94.  549   27/02/79   1.8      1010       6.3          1420
  95.  550   15/03/79   1.4       927      25.           1260
  96.  044   20/03/79   1.5       745     119.           1270
  97.  551   04/04/79   1.4       807     138.           1220
  98.  552   19/04/79   0.94      564     241.            770
  99.  043   28/04/79   1.1       569     195.            942
 100.  046   14/05/79   1.        540      24.            908
 101.  553   17/05/79   0.79      480      35.            780
 102.  047   20/06/79   0.86      464      39.9           730
 ------------------------------------------------------------------
 103.  554   20/06/79   1.1       504      40.            770
 104.  555   19/07/79   1.3       465       3.9          1100
```

```
          1 DATE     5 S    6 TDS   7 Q        8 COND

-------------------------------------------------------------
105. 048  24/07/79   1.6     921      3.7       1330
106. 556  14/08/79   1.9     975      3.7       1330
107. 049  30/08/79   1.75    661      3.        1390
108. 557  20/09/79   1.5     942      4         1290
109. 050  26/09/79   1.54    811      4.4       1190
110. 558  19/10/79   1.5     779      4.7       1250
111. 559  24/10/79   1.5     865      4.2       1320
112. 560  29/10/79   1.5     923      4.09      1390
113. 051  30/10/79   1.5     807      4.4       1300
114. 052  15/11/79   1.6     819      3.8       1250
-------------------------------------------------------------
115. 561  13/12/79   1.6    1000      4.7       1460
116. 053  13/12/79   1.6     815      4.5       1370
117. 562  10/01/80   1.6     940      4.6       1440
118. 054  30/01/80   1.64    912      4.7       1400
119. 055  27/02/80   1.49    958      4.2       1350
120. 563  27/02/80   1.5     948      4.1       1300
121. 056  13/03/80   1.55    834      4.        1340
122. 564  26/03/80   1.4     884      4.1       1340
123. 565  08/04/80   1.4     837      3.5       1330
124. 566  21/04/80   1.3     722      7.6       1190
-------------------------------------------------------------
125. 057  22/04/80   2.18    791      8.8       1250
126. 567  29/04/80   1.2     739      9.1       1140
127. 058  20/05/80   1.09    672     18.        1086
128. 059  24/06/80   1.93    924      2.6       1510
129. 568  25/06/80   1.9     982      3.1       1510
130. 060  17/07/80   2.07    898      2.5       1436
131. 569  29/07/80   1.7     941      3.        1440
132. 570  20/08/80   1.8     957      3.2       1425
133. 061  31/08/80   2.07    931      2.6       1536
134. 571  17/09/80   1.8     951      3.1       1290
-------------------------------------------------------------
135. 062  30/09/80   2.07    960      2.4       1540
136. 572  09/10/80   1.9    1030      3.9       1510
137. 063  29/10/80   1.89    993      3.        1575
138. 064  20/11/80   2.04   1012      2.9       1602
139. 573  20/11/80   1.7     991      2.8       1550
140. 065  17/12/80   2.48    960      3.1       1510
141. 574  17/12/80   1.6     965      3.1       1440
142. 066  20/01/81   1.93    929      2.7       1537
143. 575  29/01/81   1.4     990      2.8       1440
144. 067  12/02/81   1.93    854      2.5       1766
-------------------------------------------------------------
145. 576  13/02/81   1.1     736      4.1       1040
146. 577  26/03/81   1.5     805      3.2       1310
147. 068  31/03/81   1.66    993      3.7       1443
148. 069  21/04/81   1.79    963      3.7       1555
149. 578  22/04/81   1.3     774     13.        1220
150. 070  20/05/81   1.31    734      9.8       1184
151. 579  02/06/81   1.8     939      7.1       1430
152. 071  10/06/81   1.37    738      9.9       1210
153. 580  23/06/81   1.6     991      2.8       1140
154. 072  13/07/81   2.9     953      2.1       1457
-------------------------------------------------------------
155. 581  30/07/81   1.8     949      2.4       1440
156. 073  10/08/81   2.      909      2.2       1530
```

```
               1 DATE     5 B    6 TDS   7 Q        8 COND

    ----------------------------------------------------------
157. 582   24/09/81   1.9       954       2.4        1440
158. 583   28/09/81   1.8       974       2.7        1350
159. 074   07/10/81   1.8       882       2.5        1415
160. 075   28/10/81   1.8       946       2.4        1451
161. 324   30/10/81   1.7       904       2.6        1360
162. 076   16/11/81   2.        916       2.6        1414
163. 077   02/12/81   2.       1067       2.8        1540
164. 585   17/12/81   2.       1080       2.6        1400
165. 601   08/01/82   2.1      1063       1.8        1510
166. 617   24/01/82   1.94     1000       0.8        1526
----------------------------------------------------------
167. 602   02/02/82   1.9       979       0.9        1470
168. 603   11/02/82   2.2       997       0.9        1430
169. 604   19/02/82   1.7      1210       1.         1550
170. 618   20/02/82   1.87      980       1.
171. 605   02/03/82   1.9       985       0.9        1420
172. 606   09/03/82   2.        957       0.9        1390
173. 607   30/03/82   1.3       766      60.         1140
174. 619   31/03/82   1.45      705      65.
175. 608   07/04/82   1.5       778      60.         1190
176. 609   15/04/82   0.77      525    2930.          840
----------------------------------------------------------
177. 610   16/04/82   0.63      349    2080.          555
178. 611   26/04/82   0.92      480     100.          722
179. 620   29/04/82   1.        575      30.
180. 621   05/05/82   0.79      460      53.          708
181. 612   11/05/82   0.83      504      32.          744
182. 622   31/05/82   0.78      480      51.
183. 623   09/06/82   0.83      420      24.
184. 613   22/06/82   0.95      567       7.1         902
185. 614   23/06/82   0.99      560       7.1         824
186. 624   05/07/82   1.45      750       4.6        1107
----------------------------------------------------------
187. 615   20/07/82   1.3       675       3.8        1010
188. 625   26/07/82   1.7       940       3.3
189. 626   05/08/82   1.73      875       3.         1388
190. 616   18/08/82   1.4       905       2.9        1400
191. 627   24/08/82   1.85     1040       2.8
192. 628   07/09/82            1010       2.9
193. 629   27/09/82   1.87     1050       3.1
```

SECTION 4.0

MULTIPLE REGRESSIONS

```
MULTIPLE STEPWISE REGRESSION SUGGESTS TO STOP
Do you wish to stop? Y <GO>


Would you like to see a table of residuals? N <GO>
The final equation is:
Y=-0.0332271*X2 +1.13864*X4-7.62508

Would you like to save the final equation as a GLOBAL? N <GO>
Would you like to save the summary statistics as a GLOBAL? N <GO>
Would you like to save the ANOVA table? N <GO>
Would you like to save the PARAMETER table? N <GO>
#MAKE TABLE MREG_TDS_LOG FROM COLS 7,11,8,12,10 OF POPLAR WHERE COL 7 <> EMPTY AND
COL 11 <> EMPTY AND COL 8 <> EMPTY AND COL 12 <> EMPTY AND COL 10 <> EMPTY <GO>

#FIT MULTIPLE <GO>

Name of source table? MREG_TDS_LOG <GO>
Is the table in standard format? Y <GO>

Would you like to see a table of correlations? Y <GO>

 5C X 5R CORRELATIONS OF TABLE: MREG_TDS_LOG         10/01/83 PAGE 1

             1 Q         2 Q_LOG     3 COND      4 COND_LOG  5 TDS_LOG

--------------------------------------------------------------------
1. Q           1.          0.557963  -0.299811   -0.285339  -0.284143
2. Q_LOG       0.557963   1.         -0.582692   -0.594885  -0.600651
3. COND      -0.299811  -0.582692    1.           0.948801   0.918099
4. COND_LOG  -0.285339  -0.594885    0.948801    1.          0.978271
5. TDS_LOG   -0.284143  -0.600651    0.918099    0.978271   1.
                              10/01/83


Step number= 0: (number of data points=181)

Y INTERCEPT= 6.72633


 8C X 2R Analysis of Variance Table                  10/01/83 PAGE 1

   1 SOURCE    2 SUM OF   3 DF   4 MEAN     5 F VALUE   6 SIG LEVEL
               SQUARES           SQUARE
----------------------------------------------------------------
1  REGRESSION    0.          0
2  RESIDUAL     19.6304   180  0.109058

 8C X 2R Analysis of Variance Table                  10/01/83

   7 MULT   8 STD DEV
   R-SQ     OF REGR
----------------------
1       0   0.330239
2


 6C X 4R Table of Variables not in model             10/01/83 PAGE 1

       1 NAME     2 PARTIAL  3 TOLERANCE  4 MULT R-SQ  5 F TO
                  CORR                    TO ENTER     ENTER
----------------------------------------------------------------
1. X1  Q          -0.284143            1     0.0807374    15.7213
2. X2  Q_LOG      -0.600651            1     0.360782    101.03
```

```
3. X3  COND      0.918099                1   0.842905    960.44
4. X4  COND_LOG  0.978271                1   0.957015   3985.22


 6C X 4R Table of Variables not in model              10/01/83

       6 SIG.
       LEV.
--------------
1. X1  0.001
2. X2  0.0001
3. X3  0.0001
4. X4  0.0001


MULTIPLE STEPWISE REGRESSION SUGGESTS TO ENTER X4


Variables to ENTER (Separated by spaces or commas).
(If ALL, type A): X4 <GO>                              10/01/83


Step number= 1: (number of data points=181)
VARIABLES ENTERED = X4

Y INTERCEPT= -0.695067


 5C X 1R Parameter Table                               10/01/83 PAGE 1

       1 VARIABLE    2 FITTED  3 STANDARD  4 T-VALUE  5 SIG. LEV.
       NAME          VALUE     DEVIATION
----------------------------------------------------------------------
1. B4  COND_LOG       1.03616   0.0164136   63.1286      0.0001


 8C X 2R Analysis of Variance Table                    10/01/83 PAGE 1

   1 SOURCE     2 SUM OF    3 DF   4 MEAN        5 F VALUE   6 SIG LEVEL
                SQUARES            SQUARE
--------------------------------------------------------------------------
1  REGRESSION  18.7866        1   18.7866        3985.22        0.0001
2  RESIDUAL     0.843817    179    0.00471406
 8C X 2R Analysis of Variance Table                    10/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
-----------------------
1  0.957015   0.068659
2


 6C X 3R Table of Variables not in model               10/01/83 PAGE 1

       1 NAME   2 PARTIAL   3 TOLERANCE  4 MULT R-SQ    5 F TO
                CORR                     TO ENTER       ENTER
-------------------------------------------------------------------
1. X1  Q       -0.025186    0.918582     0.0000272671   0.112983
2. X2  Q_LOG   -0.112164    0.646112     0.000540787    2.26791
3. X3  COND    -0.154014    0.0997761    0.00101963     4.32482
```

```
 6C X 3R Table of Variables not in model              10/01/83

       6 SIG.
       LEV.
-----------------
1. X1  0.737168
2. X2  0.13385
3. X3  0.0389934


MULTIPLE STEPWISE REGRESSION SUGGESTS TO ENTER X3


Variables to REMOVE (Separated by spaces or commas).
(If none, hit <GO>):  <GO>


Variables to ENTER (Separated by spaces or commas).
(If none, hit <GO>): X3 <GO>                              10/01/83


Step number= 2: (number of data points=181)
VARIABLES ENTERED = X3

Y INTERCEPT= -1.2672


 5C X 2R Parameter Table                              10/01/83 PAGE 1

       1 VARIABLE   2 FITTED      3 STANDARD     4 T-VALUE
       NAME         VALUE         DEVIATION
-----------------------------------------------------------
1. B3  COND         -0.000116275  0.0000559118   -2.07962
2. B4  COND_LOG      1.13776      0.0514865      22.0981

 5C X 2R Parameter Table                              10/01/83

       5 SIG. LEV.

------------------
1. B3    0.0389932
2. B4    0.0001


 8C X 2R Analysis of Variance Table                   10/01/83 PAGE 1

   1 SOURCE     2 SUM OF    3 DF  4 MEAN      5 F VALUE  6 SIG LEVEL
                SQUARES             SQUARE
--------------------------------------------------------------------
1  REGRESSION  18.8066         2  9.40329      2031.78         0.0001
2  RESIDUAL     0.823801     178  0.0046281

 8C X 2R Analysis of Variance Table                   10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.958034  0.0680301
2


 6C X 2R Table of Variables not in model              10/01/83 PAGE 1

       1 NAME  2 PARTIAL   3 TOLERANCE  4 MULT R-SQ   5 F TO
               CORR                     TO ENTER      ENTER
```

```
1. X1  Q        -0.0406515      0.910106  0.0000693501  0.292985
2. X2  Q_LOG    -0.125055       0.642769  0.000656295   2.81206

 6C X 2R Table of Variables not in model              10/01/83

       6 SIG.
       LEV.
-----------------
1. X1  0.588993
2. X2  0.0953207


MULTIPLE STEPWISE REGRESSION SUGGESTS TO STOP
Do you wish to stop? Y <GO>


Would you like to see a table of residuals? N <GO>
The final equation is:
Y=-0.000116275*X3 +1.13776*X4-1.2672

Would you like to save the final equation as a GLOBAL? N <GO>
Would you like to save the summary statistics as a GLOBAL? N <GO>
Would you like to save the ANOVA table? N <GO>
Would you like to save the PARAMETER table? N <GO>
#LOGOUT <GO>

>LOGOUT
Have a Good Morning
10-JAN-83 10:31 TT7:  logged off RSX11M
>
```

```
FIT MULTIPLE <#> TO MREG_BORON

ERROR #133 Syntax error - statement seems to be complete at indicated point.


#FIT MULTIPLE <GO>

Name of source table? MREG_BORON <GO>
Is the table in standard format? Y <GO>

Would you like to see a table of correlations? Y <GO>

 5C X 5R CORRELATIONS OF TABLE: MREG_BORON           10/01/83 PAGE 1

             1 Q          2 Q_LOG     3 COND      4 COND_LOG   5 B

--------------------------------------------------------------------
1. Q          1.          0.557229   -0.30897    -0.294185   -0.303583
2. Q_LOG      0.557229    1.         -0.599967   -0.611626   -0.639022
3. COND      -0.30897    -0.599967    1.          0.946559    0.88679
4. COND_LOG  -0.294185   -0.611626    0.946559    1.          0.831404
5. B         -0.303583   -0.639022    0.88679     0.831404    1.
                                 10/01/83


Step number= 0: (number of data points=181)

Y INTERCEPT= 1.71912


 8C X 2R Analysis of Variance Table                  10/01/83 PAGE 1

   1 SOURCE     2 SUM OF   3 DF   4 MEAN     5 F VALUE   6 SIG LEVEL
                SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION    0.          0
2  RESIDUAL     38.3728    180   0.213182

 8C X 2R Analysis of Variance Table                  10/01/83

   7 MULT   8 STD DEV
   R-SQ     OF REGR
---------------------
1        0    0.461717
2


 6C X 4R Table of Variables not in model             10/01/83 PAGE 1

       1 NAME     2 PARTIAL   3 TOLERANCE   4 MULT R-SQ   5 F TO
                  CORR                      TO ENTER      ENTER
-------------------------------------------------------------------
1. X1  Q          -0.303583           1      0.0921625    18.1719
2. X2  Q_LOG      -0.639022           1      0.408349    123.543
3. X3  COND        0.88679            1      0.786397    659.002
4. X4  COND_LOG    0.831404           1      0.691232    400.723


 6C X 4R Table of Variables not in model             10/01/83

       6 SIG.
       LEV.
--------------
1. X1  0.001
2. X2  0.0001
```

```
3. X3   0.0001
4. X4   0.0001


MULTIPLE STEPWISE REGRESSION SUGGESTS TO ENTER X3


Variables to ENTER (Separated by spaces or commas).
(If ALL, type A): X3 <GO>                                10/01/83


Step number= 1: (number of data points=181)
VARIABLES ENTERED = X3

Y INTERCEPT= -0.234028


 5C X 1R Parameter Table                               10/01/83 PAGE 1

       1 VARIABLE    2 FITTED     3 STANDARD     4 T-VALUE  5 SIG. LEV.
       NAME          VALUE        DEVIATION
-----------------------------------------------------------------------
1. B3  COND          0.00145567  0.0000567049      25.671       0.0001


 8C X 2R Analysis of Variance Table                    10/01/83 PAGE 1

   1 SOURCE     2 SUM OF   3 DF  4 MEAN        5 F VALUE  6 SIG LEVEL
                SQUARES          SQUARE
--------------------------------------------------------------------
1  REGRESSION  30.1762       1  30.1762       659.002         0.0001
2  RESIDUAL     8.19656    179   0.0457908

 8C X 2R Analysis of Variance Table                    10/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
-----------------------
1  0.786397   0.213988
2


 6C X 3R Table of Variables not in model               10/01/83 PAGE 1

       1 NAME     2 PARTIAL    3 TOLERANCE  4 MULT R-SQ   5 F TO
                  CORR                      TO ENTER      ENTER
-------------------------------------------------------------------
1. X1  Q         -0.0673209     0.904538  0.000968071    0.810386
2. X2  Q_LOG     -0.289322      0.640039  0.0178801     16.261
3. X4  COND_LOG  -0.0536402     0.104025  0.000614595    0.513632



 6C X 3R Table of Variables not in model               10/01/83

       6 SIG.
       LEV.
----------------
1. X1  0.369222
2. X2  0.001
3. X4  0.47451


MULTIPLE STEPWISE REGRESSION SUGGESTS TO ENTER X2
```

```
Variables to REMOVE (Separated by spaces or commas).
(If none, hit <GO>):  <GO>


Variables to ENTER (Separated by spaces or commas).
(If none, hit <GO>): X2 <GO>                                10/01/83


Step number= 2: (number of data points=181)
VARIABLES ENTERED = X2

Y INTERCEPT= 0.0666454


 5C X 2R Parameter Table                              10/01/83 PAGE 1

       1 VARIABLE    2 FITTED      3 STANDARD    4 T-VALUE  5 SIG. LEV.
       NAME          VALUE         DEVIATION
------------------------------------------------------------------------
1. B2  Q_LOG        -0.0527799    0.0130886     -4.03249        0.001
2. B3  COND          0.00129106   0.0000680379   18.9757        0.0001


 8C X 2R Analysis of Variance Table                   10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 DF  4 MEAN       5 F VALUE  6 SIG LEVEL
                SQUARES         SQUARE
--------------------------------------------------------------------
1  REGRESSION  30.8624       2  15.4312        365.724        0.0001
2  RESIDUAL     7.51045   178    0.0421935

 8C X 2R Analysis of Variance Table                   10/01/83

   7 MULT     8 STD DEV
   R-SQ      OF REGR
-------------------------
1  0.804277   0.205411
2


 6C X 2R Table of Variables not in model              10/01/83 PAGE 1

       1 NAME     2 PARTIAL    3 TOLERANCE  4 MULT R-SQ  5 F TO
                  CORR                      TO ENTER     ENTER
-----------------------------------------------------------------
1. X1  Q           0.0887006      0.688492   0.00153991  1.40364
2. X4  COND_LOG  -0.108824       0.101039   0.00231789  2.12128

 6C X 2R Table of Variables not in model              10/01/83

       6 SIG.
       LEV.
----------------
1. X1  0.237702
2. X4  0.147035


MULTIPLE STEPWISE REGRESSION SUGGESTS TO STOP
Do you wish to stop? Y <GO>


Would you like to see a table of residuals? N <GO>
The final equation is:
Y=-0.0527799*X2 +0.00129106*X3 +0.0666454
```

```
Would you like to save the final equation as a GLOBAL? N <GO>
Would you like to save the summary statistics as a GLOBAL? N <GO>
Would you like to save the ANOVA table? N <GO>
Would you like to save the PARAMETER table? N <GO>
#MAKE TABLE MREG_TDS FROM COLS 7,11,8,12,6 OF POPLAR WHERE COL 7 <> EMPTY AND
COL 11 <> EMPTY AND COL 8 <> EMPTY AND COL 12 <> EMPTY AND COL 6 <> EMPTY <GO>

#FIT MULTIPLE <GO>

Name of source table? MREG_TDS <GO>
Is the table in standard format? Y <GO>

Would you like to see a table of correlations? Y <GO>

 5C X 5R CORRELATIONS OF TABLE: MREG_TDS             10/01/83 PAGE 1

             1 Q        2 Q_LOG    3 COND     4 COND_LOG  5 TDS

---------------------------------------------------------------------
1. Q          1.         0.557963  -0.299811    -0.285339  -0.295523
2. Q_LOG      0.557963   1.        -0.582692    -0.594885  -0.588242
3. COND      -0.299811  -0.582692   1.           0.948801   0.947493
4. COND_LOG  -0.285339  -0.594885   0.948801     1.         0.905816
5. TDS       -0.295523  -0.588242   0.947493     0.905816   1.
                             10/01/83


Step number= 0: (number of data points=181)

Y INTERCEPT= 868.16


 8C X 2R Analysis of Variance Table                  10/01/83 PAGE 1

   1 SOURCE    2 SUM OF     3 DF  4 MEAN   5 F VALUE  6 SIG LEVEL
               SQUARES            SQUARE
-------------------------------------------------------------------
1  REGRESSION  0.5             0
2  RESIDUAL    6.969856E06   180  38721.4

 8C X 2R Analysis of Variance Table                  10/01/83

   7 MULT        8 STD DEV
   R-SQ          OF REGR
---------------------------
1  7.173749E-08    196.778
2


 6C X 4R Table of Variables not in model             10/01/83 PAGE 1

       1 NAME    2 PARTIAL  3 TOLERANCE  4 MULT R-SQ  5 F TO
                 CORR                    TO ENTER     ENTER
-----------------------------------------------------------------
1. X1  Q         -0.295523           1    0.0873336   17.1286
2. X2  Q_LOG     -0.588242           1    0.346029    94.7124
3. X3  COND       0.947493           1    0.897744   1571.5
4. X4  COND_LOG   0.905816           1    0.820502    818.226


 6C X 4R Table of Variables not in model             10/01/83

       6 SIG.
       LEV.
--------------
```

```
1. X1   0.001
2. X2   0.0001
3. X3   0.0001
4. X4   0.0001


MULTIPLE STEPWISE REGRESSION SUGGESTS TO ENTER X3


Variables to ENTER (Separated by spaces or commas).
(If ALL, type A): X3 <GO>                                    10/01/83


Step number= 1: (number of data points=181)
VARIABLES ENTERED = X3

Y INTERCEPT= -0.246643


 5C X 1R Parameter Table                                    10/01/83 PAGE 1

          1 VARIABLE     2 FITTED   3 STANDARD   4 T-VALUE   5 SIG. LEV.
          NAME           VALUE      DEVIATION
-------------------------------------------------------------------
1. B3   COND             0.649387    0.0163812    39.6422       0.0001


 8C X 2R Analysis of Variance Table                         10/01/83 PAGE 1

    1 SOURCE     2 SUM OF             3 DF   4 MEAN           5 F VALUE
                 SQUARES                     SQUARE
-------------------------------------------------------------------
1   REGRESSION        6.257145E06      1       6.257145E06      1571.5
2   RESIDUAL     712711.             179   3981.63

 8C X 2R Analysis of Variance Table                         10/01/83

    6 SIG LEVEL   7 MULT     8 STD DEV
                  R-SQ       OF REGR
-----------------------------------------
1        0.0001   0.897744    63.1001
2


 6C X 3R Table of Variables not in model                    10/01/83 PAGE 1

          1 NAME     2 PARTIAL    3 TOLERANCE   4 MULT R-SQ   5 F TO
                     CORR                       TO ENTER      ENTER
------------------------------------------------------------------
1. X1   Q            -0.0375442     0.910113    0.000144137   0.251257
2. X2   Q_LOG        -0.139085      0.66047     0.00197811    3.51128
3. X4   COND_LOG      0.0676455     0.0997761   0.000467916   0.818258



 6C X 3R Table of Variables not in model                    10/01/83

          6 SIG.
          LEV.
-----------------
1. X1   0.616811
2. X2   0.0625908
3. X4   0.366913
```

```
MULTIPLE STEPWISE REGRESSION SUGGESTS TO STOP
Do you wish to stop? Y <GO>


Would you like to see a table of residuals? N <GO>
The final equation is:
Y=0.649387*X3-0.246643

Would you like to save the final equation as a GLOBAL? N <GO>
Would you like to save the summary statistics as a GLOBAL? N <GO>
Would you like to save the ANOVA table? N <GO>
Would you like to save the PARAMETER table? N <GO>
#MAKE TABLE MREG_B_LOG FROM COLS 7,11,8,12,9 OF POPLAR WHERE COL 7 <> EMPTY AND
COL 11 <> EMPTY AND COL 8 M\M\<> EMPTY AND COL 12 <> EMPTY AND COL 9 <> EMPTY <GO>

#FIT MULTIPLE <GO>

Name of source table? MREG_B_LOG <GO>
Is the table in standard format? Y <GO>

Would you like to see a table of correlations? Y <GO>

 5C X 5R CORRELATIONS OF TABLE: MREG_B_LOG             10/01/83 PAGE 1

             1 Q         2 Q_LOG     3 COND      4 COND_LOG   5 B_LOG


---------------------------------------------------------------------
1. Q          1.          0.557229  -0.30897     -0.294185   -0.306571
2. Q_LOG      0.557229    1.        -0.599967    -0.611626   -0.658666
3. COND      -0.30897    -0.599967   1.           0.946559    0.893511
4. COND_LOG  -0.294185   -0.611626   0.946559     1.          0.951586
5. B_LOG     -0.306571   -0.658666   0.893511     0.951586    1.
                              10/01/83


Step number= 0: (number of data points=181)

Y INTERCEPT= 0.485642


 8C X 2R Analysis of Variance Table                    10/01/83 PAGE 1

   1 SOURCE     2 SUM OF   3 DF   4 MEAN     5 F VALUE   6 SIG LEVEL
                SQUARES           SQUARE
----------------------------------------------------------------
1  REGRESSION    0.          0
2  RESIDUAL     28.3292    180   0.157385

 8C X 2R Analysis of Variance Table                    10/01/83

   7 MULT   8 STD DEV
   R-SQ     OF REGR
---------------------
1       0   0.396717
2


 6C X 4R Table of Variables not in model               10/01/83 PAGE 1

       1 NAME     2 PARTIAL   3 TOLERANCE   4 MULT R-SQ   5 F TO
                  CORR                      TO ENTER      ENTER
----------------------------------------------------------------
1. X1   Q         -0.306571              1    0.0939859     18.5687
2. X2   Q_LOG     -0.658666              1    0.43384      137.165
3. X3   COND       0.893511              1    0.798361     708.727
4. X4   COND_LOG   0.951586              1    0.905517    1715.51
```

```
 6C X 4R Table of Variables not in model                   10/01/83

       6 SIG.
       LEV.
--------------
1. X1  0.001
2. X2  0.0001
3. X3  0.0001
4. X4  0.0001


MULTIPLE STEPWISE REGRESSION SUGGESTS TO ENTER X4


Variables to ENTER (Separated by spaces or commas).
(If ALL, type A): X4 <GO>                                   10/01/83


Step number= 1: (number of data points=181)
VARIABLES ENTERED = X4

Y INTERCEPT= -8.37257


 5C X 1R Parameter Table                                   10/01/83 PAGE 1

       1 VARIABLE    2 FITTED  3 STANDARD  4 T-VALUE  5 SIG. LEV.
       NAME          VALUE     DEVIATION
-------------------------------------------------------------------
1. B4  COND_LOG       1.23592   0.0298395   41.4188       0.0001


 8C X 2R Analysis of Variance Table                        10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 DF  4 MEAN       5 F VALUE  6 SIG LEVEL
                SQUARES         SQUARE
--------------------------------------------------------------------
1  REGRESSION  25.6526       1  25.6526       1715.51       0.0001
2  RESIDUAL      2.67664   179   0.0149533

 8C X 2R Analysis of Variance Table                        10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.905517   0.122284
2


 6C X 3R Table of Variables not in model                   10/01/83 PAGE 1

       1 NAME  2 PARTIAL    3 TOLERANCE  4 MULT R-SQ  5 F TO
               CORR                      TO ENTER     ENTER
-----------------------------------------------------------------
1. X1  Q       -0.090641      0.913455  0.000776256   1.47453
2. X2  Q_LOG   -0.315195      0.625913  0.00938673   19.6346
3. X3  COND    -0.0728491     0.104025  0.000501422   0.949684



 6C X 3R Table of Variables not in model                   10/01/83
```

```
       6 SIG.
       LEV.
-----------------
1. X1  0.226241
2. X2  0.001
3. X3  0.331122


MULTIPLE STEPWISE REGRESSION SUGGESTS TO ENTER X2


Variables to REMOVE (Separated by spaces or commas).
(If none, hit <GO>):  <GO>


Variables to ENTER (Separated by spaces or commas).
(If none, hit <GO>): X2 <GO>                              10/01/83


Step number= 2: (number of data points=181)
VARIABLES ENTERED = X2

Y INTERCEPT= -7.62508


 5C X 2R Parameter Table                               10/01/83 PAGE 1

       1 VARIABLE    2 FITTED     3 STANDARD  4 T-VALUE  5 SIG. LEV.
       NAME          VALUE        DEVIATION
---------------------------------------------------------------------
1. B2  Q_LOG         -0.0332271   0.00749862   -4.43109       0.001
2. B4  COND_LOG       1.13864     0.0358947    31.7216        0.0001


 8C X 2R Analysis of Variance Table                    10/01/83 PAGE 1

   1 SOURCE     2 SUM OF   3 DF   4 MEAN       5 F VALUE   6 SIG LEVEL
                SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  25.9185        2   12.9593        956.87        0.0001
2  RESIDUAL     2.41072     178    0.0135434

 8C X 2R Analysis of Variance Table                    10/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
-----------------------
1  0.914903    0.116376
2


 6C X 2R Table of Variables not in model               10/01/83 PAGE 1

       1 NAME  2 PARTIAL    3 TOLERANCE  4 MULT R-SQ  5 F TO
               CORR                      TO ENTER     ENTER
---------------------------------------------------------------
1. X1  Q        0.0810214     0.686022   0.000558614  1.16959
2. X3  COND    -0.104485      0.103319   0.000929018  1.95368

 6C X 2R Table of Variables not in model               10/01/83

       6 SIG.
       LEV.
-----------------
1. X1  0.280954
```

SECTION 5.0

LINEAR REGRESSION BUS COND

```
# <GO>
#MAKE GRAPH B_LOG_COND_LOG_310 FROM COL 'COND_LOG' OF POPLAR WHERE COL 13 > 2 AND
COL 13 < 11 VS COL 'B_LOG' WHERE COL 13 > 2 NA\AN\AND COL 13 < 11 <GO>

#DIS B_LOG_COND_LOG_310 <GO>


                               B_LOG_COND_LOG_310
             3.+
               !
               !
               !
               !
             1.+                                 ++ ++++++ +
               !                              +++++++++
               !                        ++++++ +++
               !                    +      +
            -1.+           ++                          r=0.96
               !            +
               ! +
               !
            -3.+-------+-------+-------+-------+-------+-------+
               5.     5.5      6.     6.5      7.     7.5      8.

                 +   B_LOG




#FIT LINE TO CURVE 1 OF B_LOG_COND_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        1.24222*X -8.41642


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                               10/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    -8.41642   0.232773    -36.1571      0.0001
2  SLOPE         1.24222   0.0326611    38.0337      0.0001
NUMBER OF DATA POINTS = 125

 8C X 2R ANALYSIS OF VARIANCE                          10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN       5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION   23.7618        1  23.7618       1446.52       0.0001
2  RESIDUAL      2.0205      123   0.0164269

 8C X 2R ANALYSIS OF VARIANCE                          10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.921632   0.128167
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
#MAKE GRAPH B_COND_310 FROM COL 'COND' OF POPLAR WHERE COL 13 < 11 AND COL 13 >2
VS COL 'B' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_COND_310 <GO>


                                   B_COND_310
             4.+
               ¦
               ¦
             3.+                      +         +   +
               ¦                           + +
               ¦                   ++  + ++  +     r = 0.91
             2.+                   +++++++ +
               ¦                  +++++++
               ¦               + ++++++
             1.+           ++++ + +
               ¦        + +++
               ¦    +
              0+--+----+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   B




#FIT LINE TO CURVE 1 OF B_COND_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        0.00147262*X -0.253828


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             10/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD    4 T-VALUE  5 SIG. LEV.
                             DEVIATION
------------------------------------------------------------------
1  INTERCEPT    -0.253828    0.0824275      -3.07941   0.00255823
2  SLOPE         0.00147262  0.0000619625   23.7664    0.0001
NUMBER OF DATA POINTS = 125

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  26.8693         1  26.8693       564.84       0.0001
2  RESIDUAL     5.85108     123    0.0475697

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.821179   0.218105
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
# <GO>
#MAKE GRAPH B_COP\P\ND_LOG_310 FROM COL 'COND_LOG' OF POPLAR WHERE COL 13 > 2 AND
COL 13 < 11 VS COL 'B' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_COND_LOG_310 <GO>


                                 B_COND_LOG_310
             4.+
               :
               :
             3.+                                    +    + +
               :                                       ++
               :                                 ++ ++++
             2.+                                 ++++++
               :                                ++++++
               :                              ++++++
             1.+                        ++++++ +++
               :                    +   + ++
               :          +++
              0+-+-----+-------+-------+-------+-------+-------+-------+  .
               5.     5.5      6.     6.5      7.     7.5      8.

                 +   B




#FIT LINE TO CURVE 1 OF B_COND_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        1.2304*X -7.10884


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                              10/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    -7.10884   0.502298    -14.1527       0.0001
2  SLOPE         1.2304    0.0704788    17.4578       0.0001
NUMBER OF DATA POINTS = 125

 8C X 2R ANALYSIS OF VARIANCE                         10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  23.312           1  23.312      304.767       0.0001
2  RESIDUAL      9.40841      123   0.0764911

 8C X 2R ANALYSIS OF VARIANCE                         10/01/83

   7 MULT   8 STD DEV
   R-SQ     OF REGR
----------------------
1  0.71246    0.27657
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
Do you want to save the Residuals table? N <GO>
#MAKE GRAPH B_LOG_COND_310 FROM COL 'COND' OF POPLAR WHERE COL 13 > 2 AND COL 13
< 11 VS COL 'B_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_LOG_COND_310 <GO>


                                 B_LOG_COND_310
             3.+
               !
               !
               !
             1.+                   ++ ++ +++ +  +   +
               !               + +++++++++ +
               !          +++++ +++
               !        +   +
            -1.+    +
               !    +
               !  +
               !
            -3.+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   B_LOG




#FIT LINE TO CURVE 1 OF B_LOG_COND_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        0.00130253*X -1.25744


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             10/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD    4 T-VALUE  5 SIG. LEV.
                             DEVIATION
------------------------------------------------------------------
1  INTERCEPT    -1.25744     0.074358       -16.9107       0.0001
2  SLOPE         0.00130253  0.0000558965    23.3026       0.0001
NUMBER OF DATA POINTS = 125

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  21.0208        1  21.0208        543.01       0.0001
2  RESIDUAL     4.76154     123   0.0387117

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.815318   0.196753
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
  <GO>
#MAKE GRAPH B_COND_ALL FROM COL 'COND' OF POPLAR VS COL 'B' <GO>

#DIS B_COND_ALL <GO>


                                   B_COND_ALL
             4.+
               |
               |
             3.+                      +         +   +
               |                           + +
               |                   ++ +++++  +
             2.+                   +++++++ +
               |                  +++++++
               |               + ++++++           r= 0.89
             1.+           ++++ + +
               |        + +++
               |    +
              0+--+----+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   B



#FIT LINE TO CURVE 1 OF B_COND_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        0.00145566*X -0.234014


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                               07/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD    4 T-VALUE  5 SIG. LEV.
                             DEVIATION
-------------------------------------------------------------------
1  INTERCEPT    -0.234014    0.0777306     -3.01058    0.0029822
2  SLOPE         0.00145566  0.0000567065   25.6701    0.0001
NUMBER OF DATA POINTS = 181

 8C X 2R ANALYSIS OF VARIANCE                          07/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
---------------------------------------------------------------------
1  REGRESSION  30.1758        1   30.1758     658.955       0.0001
2  RESIDUAL     8.19703     179    0.0457934

 8C X 2R ANALYSIS OF VARIANCE                          07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.786385   0.213994
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
```

```
 MAKE GRAPH B_COND_LOG_ALL FROM COL 'COND_LOG' OF POPLAR VS COL 'B' <GO>

#DIS B_COND_LOG_ALL <GO>


                                 B_COND_LOG_ALL
             4.+
               |
               |
             3.+                                    +    + +
               |                                       ++
               |                                 +++++++
             2.+                                 +++++++
               |                                ++++++
               |                              ++++++
             1.+                        ++++++++++
               |                    +   + ++
               |          +++
              0+-+-----+-------+-------+-------+-------+-------+
               5.     5.5     6.     6.5      7.     7.5      8.

                 +   B



#FIT LINE TO CURVE 1 OF B_COND_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        1.25684*X -7.28908


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                               07/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
----------------------------------------------------------------
1  INTERCEPT    -7.28908   0.450346    -16.1855       0.0001
2  SLOPE         1.25684   0.0627767    20.0209       0.0001
NUMBER OF DATA POINTS = 181

 8C X 2R ANALYSIS OF VARIANCE                          07/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN       5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
-----------------------------------------------------------------------
1  REGRESSION   26.526        1   26.526        400.796       0.0001
2  RESIDUAL     11.8468     179    0.0661834

 8C X 2R ANALYSIS OF VARIANCE                          07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
--------------------------
1  0.691271   0.257261
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
 MAKE GRAPH B_LOG_COND_ALL FROM COL 'COND' OF POPLAR VS COL 'B_LOG' <GO>

#DIS B_LOG_COND_ALL <GO>


                                 B_LOG_COND_ALL
             3.+
               |
               |
               |
             1.+                   ++ ++++++ +  +   +
               |               + +++++++++ +
               |          +++++ +++
               |        +   +
            -1.+    +
               |    +
               |  +
               |
            -3.+-------+-------+-------+-------+-------+-------+
               0.      500.   1000.   1500.   2000.   2500.   3000.

                 +   B_LOG




#FIT LINE TO CURVE 1 OF B_LOG_COND+\+\_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        0.00126023*X -1.20526


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             07/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD    4 T-VALUE  5 SIG. LEV.
                             DEVIATION
------------------------------------------------------------------
1  INTERCEPT    -1.20526     0.0648884      -18.5744       0.0001
2  SLOPE         0.00126023  0.0000473378    26.622        0.0001
NUMBER OF DATA POINTS = 181

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN     5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
-------------------------------------------------------------------
1  REGRESSION  22.617         1  22.617       708.728       0.0001
2  RESIDUAL     5.71225     179   0.031912

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.798362   0.178639
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
 MAKE GRAPH B_LOG_COND_LOG_ALL FROM COL 'COND_LOG' OF POPLAR VS COL 'B_LOG' <GO

#DIS B_LOG_COND_LOG_ALL <GO>

                               B_LOG_COND_LOG_ALL
             3.+
               ¦
               ¦
               ¦
             1.+                                  +++++++++ +
               ¦                              ++++++++++
               ¦                        ++++++++++
               ¦                    +      +         r = 0.95
            -1.+          ++
               ¦            +
               ¦ +
               ¦
            -3.+-------+-------+-------+-------+-------+-------+
               5.     5.5      6.     6.5      7.     7.5      8.

                 +   B_LOG



#FOI\IO\IT LINE TO CURVE 1 OF B_LOG_COND_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        1.23603*X -8.37339


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             07/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    -8.37339   0.213972    -39.1332       0.0001
2  SLOPE         1.23603   0.0298269    41.4402       0.0001
NUMBER OF DATA POINTS = 181

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  25.6548        1  25.6548       1717.12        0.0001
2  RESIDUAL     2.67437     179   0.0149406

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.905597   0.122232
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

SECTION 6.0

LINEAR REGRESSION TDS vs COND

```
#MAKE GRAPH TDS_COND_310 FROM COL 'COND' OF POPLAR WHERE COL 13 > 2 AND COL 13
VS COL 'TDS' WHERE COL 13 > 2 AND COL 2\2\13 < 11 <GO>

#DIS TDS_COND_310 <GO>


                                  TDS_COND_310
          2000.+
               :
               :
          1500.+                                +   +
               :                             +
               :                           + +
          1000.+                   +++++++ +        r= 0.97
               :                 +++++++ ++
               :              +++++  +
           500.+          +++++
               :        +
               :  + +
             0.+-------+-------+-------+-------+-------+-------+-------+
               0.      500.   1000.   1500.   2000.   2500.   3000.

                 +   TDS




#FIT LINE TO CURVE 1 OF TDS_COND_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        0.647405*X -4.01807


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                            10/01/83 PAGE 1

   1 PARAMETER  2 VALUE     3 STANDARD  4 T-VALUE  5 SIG. LEV.
                            DEVIATION
----------------------------------------------------------------
1  INTERCEPT     -4.01807    18.6335    -0.215636     0.829625
2  SLOPE          0.647405   0.014047   46.0886       0.0001
NUMBER OF DATA POINTS = 126

 8C X 2R ANALYSIS OF VARIANCE                       10/01/83 PAGE 1

   1 SOURCE     2 SUM OF           3 D.F.  4 MEAN          5 F VALUE
                SQUARES                    SQUARES
---------------------------------------------------------------------
1  REGRESSION       5.419357E06       1       5.419357E06    2124.15
2  RESIDUAL     316362.             124    2551.31

 8C X 2R ANALYSIS OF VARIANCE                       10/01/83

   6 SIG. LEV.  7 MULT     8 STD DEV
                R-SQ         OF REGR
-------------------------------------
1        0.0001  0.944844    50.5104
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
```

```
#MAKE GRAPH TDS_LOG_COND_LOG_310 FROM COL 'COND_LOG' OF POPLAR WHERE COL 13 >
COL 13 < 11 VS COL 'TDS_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS TDS_LOG_COND_LOG_310 <GO>


                              TDS_LOG_COND_LOG_310
             8.+
               |
               |                                         + +
             7.+                                 ++++++++
               |                              +++++++++
               |                        ++++++ +   +
             6.+                    +   +              r=0.99
               |
               |          +++
             5.+
               | +
               |
             4.+-------+-------+-------+-------+-------+-------+
               5.     5.5      6.     6.5      7.     7.5      8.

                 +   TDS_LOG




#FIT LINE TO CURVE 1 OF TDS_LOG_COND_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        1.03538*X -0.695193


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                   10/01/83 PAGE 1

   1 PARAMETER  2 VALUE     3 STANDARD  4 T-VALUE  5 SIG. LEV.
                            DEVIATION
-----------------------------------------------------------------
1  INTERCEPT    -0.695193   0.104191     -6.6723       0.0001
2  SLOPE         1.03538    0.0146308    70.7676       0.0001
NUMBER OF DATA POINTS = 126

 8C X 2R ANALYSIS OF VARIANCE                              10/01/83 PAGE 1

   1 SOURCE     2 SUM OF    3 D.F.  4 MEAN        5 F VALUE  6 SIG. LEV.
                SQUARES             SQUARE
-------------------------------------------------------------------------
1  REGRESSION  17.1958          1   17.1958           5008         0.0001
2  RESIDUAL     0.425775      124    0.00343367

 8C X 2R ANALYSIS OF VARIANCE                              10/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
-------------------------
1  0.975838   0.0585975
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
```

```
#MAKE GRAPH TDS_COND_LOG_310 FROM COL 'COND_LOG' OF POPLAR WHERE COL 13 > 2 AN
COL 13 < 11 VS COL 'TDS' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS TDS_COND_LOG_310 <GO>


                                TDS_COND_LOG_310
          2000.+
               |
               |
          1500.+                                         + +
               |                                        +
               |                                       +
          1000.+                                 ++++++
               |                               ++++++++
               |                             +++++ +
           500.+                        ++++++
               |                    +
               | +        +++
             0.+-------+-------+-------+-------+-------+-------+-------+
               5.     5.5      6.     6.5      7.     7.5      8.

                 +   TDS




#FIT LINE TO CURVE 1 OF TDS_COND_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        553.31*X -3106.02


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>
 5C X 2R PARAMETER TABLE                              10/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT   -3106.02    145.022    -21.4175       0.0001
2  SLOPE         553.31     20.3644    27.1705       0.0001
NUMBER OF DATA POINTS = 126

 8C X 2R ANALYSIS OF VARIANCE                         10/01/83 PAGE 1

   1 SOURCE    2 SUM OF          3 D.F.  4 MEAN          5 F VALUE
               SQUARES                   SQUARE
-------------------------------------------------------------------
1  REGRESSION      4.910845E06       1     4.910845E06    738.227
2  RESIDUAL    824875.              124  6652.22

 8C X 2R ANALYSIS OF VARIANCE                         10/01/83

   6 SIG. LEV.  7 MULT    8 STD DEV
                R-SQ      OF REGR
------------------------------------
1       0.0001  0.856186    81.5611
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
Do you want to save the Residuals table? N <GO>
#MAKE GRAPH TDS_LOG_COND_310 FROM COL 'COND' OF POPLAR WHERE COL 13 > 2 AND COL
< 11 VS COL 'TDS_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS TDS_LOG_COND_310 <GO>


                                TDS_LOG_COND_310
             8.+
               !
               !                                +   +
             7.+                   +++++++ + +
               !               +++++++++ ++
               !           ++++  +   +
             6.+        + ++
               !
               !    +
             5.+
               !  +
               !
             4.+-------+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   TDS_LOG




#FIT LINE TO CURVE 1 OF TDS_LOG_COND_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        0.00108267*X +5.27522


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>
 5C X 2R PARAMETER TABLE                             10/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD    4 T-VALUE  5 SIG. LEV.
                             DEVIATION
------------------------------------------------------------------
1  INTERCEPT    5.27522     0.0520175      101.412         0.0001
2  SLOPE        0.00108267  0.0000392137    27.6095        0.0001
NUMBER OF DATA POINTS = 126

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN       5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
---------------------------------------------------------------------
1  REGRESSION  15.1561        1   15.1561        762.284        0.0001
2  RESIDUAL     2.46543     124    0.0198825

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83

   7 MULT   8 STD DEV
   R-SQ     OF REGR
----------------------
1  0.86009   0.141005
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
 MAKE GRAPH TDS_COND_LOG_ALL FROM COL 'COND_LOG' OF POPLAR VS COL 'TDS' <GO>

#DIS TDS_COND_LOG_ALL <GO>


                                TDS_COND_LOG_ALL
          2000.+
               :
               :
          1500.+                                          + +
               :                                         +
               :                                   + +++
          1000.+                                 ++++++
               :                               +++++++++
               :                             +++++ +
           500.+                        ++++++
               :                    +
               : +       +++
             0.+-------+-------+-------+-------+-------+-------+-------+
               5.     5.5      6.     6.5      7.     7.5      8.

                 +   TDS





#FIT LINE TO CURVE 1 OF TDS_COND_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        571.695*X -3226.53


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                 07/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE  5 SIG. LEV.
                           DEVIATION
--------------------------------------------------------------

1  INTERCEPT    -3226.53     143.278    -22.5194       0.0001
2  SLOPE          571.695     19.9855    28.6055       0.0001
NUMBER OF DATA POINTS = 181

 8C X 2R ANALYSIS OF VARIANCE                            07/01/83 PAGE 1

   1 SOURCE    2 SUM OF     3 D.F.  4 MEAN          5 F VALUE
               SQUARES              SQUARE
--------------------------------------------------------------

1  REGRESSION  5.718786E06        1    5.718786E06    818.256
2  RESIDUAL    1.251029E06      179  6988.99

 8C X 2R ANALYSIS OF VARIANCE                            07/01/83

   6 SIG. LEV.  7 MULT    8 STD DEV
                R-SQ      OF REGR
------------------------------------

1       0.0001  0.820508    83.6002
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
 MAKE GRAPH TDS_LOG_COND_LOG_ALL FROM COL 'COND_LOG' OF POPLAR VS COL 'TDS_LOG

#DIS TDS_LOG_COND_LOG_ALL <GO>


                              TDS_LOG_COND_LOG_ALL
             8.+
               !
               !                                          + +
             7.+                                  ++++++++
               !                               +++++++++++
               !                         ++++++ +   +
             6.+                     +   +
               !
               !          +++
             5.+
               ! +
               !
             4.+-------+-------+-------+-------+-------+-------+
               5.     5.5       6.     6.5      7.     7.5      8.

                 +   TDS_LOG




#FIT LINE TO CURVE 1 OF TDS_LOG_COND_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        1.03664*X -0.698439


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                              07/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE  5 SIG. LEV.
                           DEVIATION
--------------------------------------------------------------
1  INTERCEPT    -0.698439   0.117428    -5.94783       0.0001
2  SLOPE         1.03664    0.0163796   63.288         0.0001
NUMBER OF DATA POINTS = 181

 8C X 2R ANALYSIS OF VARIANCE                         07/01/83 PAGE 1

   1 SOURCE    2 SUM OF   3 D.F.  4 MEAN       5 F VALUE  6 SIG. LEV.
               SQUARES            SQUARE
----------------------------------------------------------------------
1  REGRESSION  18.803          1  18.803         4005.28       0.0001
2  RESIDUAL     0.840325     179   0.00469455

 8C X 2R ANALYSIS OF VARIANCE                         07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.957221  0.0685168
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
   <GO>
#MAKE GRAPH TDS_COND_ALL FROM COL 'COND' OF POPLAR VS COL 'TDS' <GO>

#DIS TDS_COND_ALL <GO>


                                  TDS_COND_ALL
          2000.+
               !
               !
          1500.+                                 +   +
               !                             +
               !                      + ++ + +
          1000.+                   +++++++ +
               !                 +++++++++++
               !              +++++  +
           500.+          +++++
               !        +
               !  + +
             0.+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   TDS




#FIT LINE TO CURVE 1 OF TDS_COND_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        0.649377*X -0.233276


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                07/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE   5 SIG. LEV.
                             DEVIATION
-------------------------------------------------------------------
1  INTERCEPT    -0.233276  22.4053     -0.0104116       0.999
2  SLOPE         0.649377   0.0163832  39.6368          0.0001
NUMBER OF DATA POINTS = 181

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83 PAGE 1

   1 SOURCE    2 SUM OF            3 D.F.  4 MEAN          5 F VALUE
               SQUARES                     SQUARE
-----------------------------------------------------------------------
1  REGRESSION       6.256929E06       1      6.256929E06    1571.07
2  RESIDUAL    712886.                  179  3982.6

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83

   6 SIG. LEV.  7 MULT    8 STD DEV
                R-SQ      OF REGR
-------------------------------------
1       0.0001  0.897718    63.1079
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

SECTION 7.0

PROGRAM (SOFTWARE) DOCUMENTATION FOR FLOW WEIGHTING

```
** RSX-11M V4.0 **     [70,1]POPLAR    - NO PAGE LIMIT       10-JAN-83    08:22:43
** RSX-11M V4.0 **     FORM #0 - NORMAL HARDWARE FORMS       10-JAN-83    08:22:43
** RSX-11M V4.0 **     FORM FEED IMPLIED AFTER 64 LINES      10-JAN-83    08:22:43
** RSX-11M V4.0 **     JOB CONTAINS 4 FILESPECS              10-JAN-83    08:22:43
```

```
 [[[  7777   000          1    ]]]
 [        7 0   0        11      ]
 [        7 0  00         1      ]
 [       7  0 0 0   ,,    1      ]
 [      7   00  0   ,,    1      ]
 [     7    0   0    ,    1      ]
 [[[  7      000    ,    111   ]]]
```

```
PPPP   OOO  PPPP  L      AAA  RRRR
P   P O   O P   P L     A   A R   R
P   P O   O P   P L     A   A R   R
PPPP  O   O PPPP  L     A   A RRRR
P     O   O P     L     AAAAA R R
P     O   O P     L     A   A R  R
P      OOO  P     LLLLL A   A R   R
```

```
** RSX-11M V4.0 **     [70,1]POPLAR    - NO PAGE LIMIT       10-JAN-83    08:22:43
** RSX-11M V4.0 **     FORM #0 - NORMAL HARDWARE FORMS       10-JAN-83    08:22:43
** RSX-11M V4.0 **     FORM FEED IMPLIED AFTER 64 LINES      10-JAN-83    08:22:43
** RSX-11M V4.0 **     JOB CONTAINS 4 FILESPECS              10-JAN-83    08:22:43
```

```
/* Complete analysis */
PROCEDURE ;

DO I = 1 TO 3 ;

  PARM = ROW I COL 0 OF POPCON ;
  CALL MONTHLIES ( 'POPLAR', 1, 7, 3, 10, ROW I COL 1 OF POPCON,
                   PARM.'_DQ' ) ;
  MAKE TABLE ( PARM.'_MQ' ) FROM COL 1 OF TABLE ( PARM.'_DQ' ) ;
  SET HEADING OF COL 2 OF TABLE ( PARM.'_MQ' ) TO 'MEANQ' ;
  SET COL 2 OF TABLE ( PARM.'_MQ' ) TO COL 1 OF MEANQ ;

  DO J = 1 TO 5 ;
    HEADER = ROW J COL 0 OF POPMOV ;
    N = ROW J COL 1 OF POPMOV ;
    M = ROW J COL 2 OF POPMOV ;
    CALL MOVAVG ( PARM.'_DQ', 1, 2, HEADER, N, M ) ;
    CALL MOVAVG ( PARM.'_MQ', 1, 2, HEADER, N, M ) ;
  END ;

  PRINTOUT TABLE ( PARM.'_DQ' ) ON FILE PARM.'DQ.LST' WIDTH 80 HEIGHT 64 ;
  PRINTOUT TABLE ( PARM.'_MQ' ) ON FILE PARM.'MQ.LST' WIDTH 80 HEIGHT 64 ;

END ;

END ; /* of procedure */
```

```
/* Reduce to monthly results */
PROCEDURE ( SRCTBL, DATE_COL, FLOW_COL, FIRST_MONTH, LAST_MONTH, PARM_COL,
            DSTTBL ) ;

CRLF = '
' ;


IF NARGS < 1 THEN DO ;
  SRCTBL = GETTABLE ( 'Which data table should I use? ' ) ;
END ;

IF NARGS < 2 THEN DO ;
  DATE_COL = GETCOLUMN ( 'Which column should I use for dates? ', SRCTBL ) ;
END ;

IF NARGS < 3 THEN DO ;
  FLOW_COL = GETCOLUMN ( 'Which column should I use for flows? ', SRCTBL ) ;
END ;

IF NARGS < 4 THEN DO ;
  FIRST_MONTH = GBNDI ( 'In which month does the season start? ', 1, 12 ) ;
END ;

IF NARGS < 5 THEN DO ;
  LAST_MONTH = GBNDI ( 'In which does it end? ', FIRST_MONTH, 12 ) ;
END ;

IF NARGS < 6 THEN DO ;
  PARM_COL = GETCOLUMN ( 'Which column should I convert to monthlies? ',
                         SRCTBL ) ;
END ;

IF NARGS < 7 THEN DO ;
  DSTTBL = GETTABLE ( 'What name should I call the result? ', TRUE ) ;
END ;

LCOL = LAST COL OF TABLE ( SRCTBL ) + 1 ;
SET COL LCOL OF TABLE ( SRCTBL ) TO COL DATE_COL - '31/12/59' ;
SORT TABLE ( SRCTBL ) BY COL LCOL ;
DELETE COL LCOL OF TABLE ( SRCTBL ) ;
MULTIPLE = FALSE ;
PREVIOUS = EXT ( 4, 8, ROW 1 COL DATE_COL OF TABLE ( SRCTBL ) ) ;
PREVIOUS = CAT ( EXT ( 1, 2, PREVIOUS ) - 1, EXT ( 3, 5, PREVIOUS ) ) ;

IF CHARS ( PREVIOUS ) < 5 THEN DO ;
  PREVIOUS = '0'.PREVIOUS ;
END ;

SET HEADING OF COL 1 OF TABLE ( DSTTBL ) TO
                               HEADING OF COL PARM_COL OF TABLE ( SRCTBL ) ;
SET HEADING OF COL 2 OF TABLE ( DSTTBL ) TO
                               HEADING OF COL FLOW_COL OF TABLE ( SRCTBL ) ;
DSTROW = 0 ;

DO I = 1 TO LAST ROW OF TABLE ( SRCTBL ) ;

  MONTH_YEAR = EXT ( 4, 8, ROW I COL DATE_COL OF TABLE ( SRCTBL ) ) ;
  MONTH = EXT ( 1, 2, MONTH_YEAR ) ;
  PARM = ROW I COL PARM_COL OF TABLE ( SRCTBL ) ;
  Q = ROW I COL FLOW_COL OF TABLE ( SRCTBL ) ;

  IF PARM <> EMPTY AND Q <> EMPTY AND
                       MONTH >= FIRST_MONTH AND MONTH <= LAST_MONTH THEN DO ;
```

```
    IF MONTH_YEAR = PREVIOUS THEN DO ;

      IF NOT MULTIPLE THEN DO ;
        SET ROW DSTROW COL 1 OF TABLE ( DSTTBL ) TO ROW DSTROW COL 1 *
                                                    ROW DSTROW COL 2 ;
        N = 1 ;
      END ;

      SET ROW DSTROW COL 1 OF TABLE ( DSTTBL ) TO ROW DSTROW COL 1 + PARM * Q ;
      SET ROW DSTROW COL 2 OF TABLE ( DSTTBL ) TO ROW DSTROW COL 2 + Q ;
      N = N + 1 ;
      MULTIPLE = TRUE ;
      END ;

    ELSE DO ;

      IF MULTIPLE THEN DO ;
        SET ROW DSTROW COL 1 OF TABLE ( DSTTBL ) TO
                 SIGFIG ( ( ROW DSTROW COL 1 / ROW DSTROW COL 2 ), 3 ) ;
        SET ROW DSTROW COL 2 OF TABLE ( DSTTBL ) TO
                 SIGFIG ( ROW DSTROW COL 2 / N, 3 ) ;
        MULTIPLE = FALSE ;
      END ;

      DO WHILE PREVIOUS <> MONTH_YEAR ;

        M = EXT ( 1, 2, PREVIOUS ) ;
        Y = EXT ( 4, 5, PREVIOUS ) ;
        M = M + 1 ;

        IF M > LAST_MONTH THEN DO ;
          Y = Y + 1 ;
          M = FIRST_MONTH ;
        END ;

        PREVIOUS = CAT ( M, '/', Y ) ;

        IF CHARS ( PREVIOUS ) < 5 THEN DO ;
          PREVIOUS = '0'.PREVIOUS ;
        END ;

        IF PREVIOUS <> MONTH_YEAR THEN DO ;
          CALL NEWROW ( DSTTBL, PREVIOUS ) ;
          DSTROW = DSTROW + 1 ;
        END ;

      END ;

      CALL NEWROW ( DSTTBL, MONTH_YEAR, PARM, Q ) ;
      DSTROW = DSTROW + 1 ;

    END ;

  END ;

END ;

END ; /* of procedure */
```

```
/* Get a column number */
PROCEDURE ( PROMPT, SRCTBL ) ;

CRLF = '
' ;
GETCOLUMN = EMPTY ;
DO WHILE GETCOLUMN = EMPTY ;
  GETCOLUMN = GETTEXT ( PROMPT ) ;
  IF NOT TNUM ( GETCOLUMN ) THEN
    GETCOLUMN = COLNUMBER ( SRCTBL, GETCOLUMN ) ;
  ELSE DO ;
    GETCOLUMN = GETCOLUMN + 0 ;
    IF GETCOLUMN < 0 OR GETCOLUMN > LAST COL OF TABLE ( SRCTBL ) THEN DO ;
      GETCOLUMN = EMPTY ;
    END ;
  END ;
  IF GETCOLUMN = EMPTY THEN DO ;
    TYPE CAT ( CRLF, 'I could not find that column in ', SRCTBL, '.' ) ;
  END ;
END ;
RETURN GETCOLUMN ;
END ;
```

```
/* Moving averages */
PROCEDURE ( SRCTBL, RESULTS, WEIGHTS, HEADER, N, M ) ;

CRLF = '
' ;

IF NARGS < 1 THEN DO ;
  SRCTBL = GETTABLE ( 'Which data table should I use? ' ) ;
END ;

LROW = LAST ROW OF TABLE ( SRCTBL ) ;

IF NARGS < 2 THEN DO ;
  RESULTS = GETCOLUMN ( 'Which parameter do you want smoothed? ', SRCTBL ) ;
END ;

IF NARGS < 3 THEN DO ;

  IF YESANSWER ( 'Do you want a weighted moving average? ' ) THEN
    WEIGHTS = GETCOLUMN ( 'Which column contains the weights? ', SRCTBL ) ;
  ELSE DO ;
    CLEAR WEIGHTS ;
  END ;

END ;

IF NARGS < 4 THEN DO ;
  HEADER = GETTEXT ( 'What heading should I put on the new column? ' ) ;
END ;

IF NARGS < 5 THEN DO ;
  N = GBNDI ( 'How many results should I use in each average? ', 2, LROW ) ;
END ;

IF NARGS < 6 THEN DO ;
  M = GBNDI ( 'How much should I move the average each time? ', 1, N ) ;
END ;

NEW = LAST COL OF TABLE ( SRCTBL ) + 1 ;
SET HEADING OF COL NEW OF TABLE ( SRCTBL ) TO HEADER ;
SUM_RESULTS = 0 ;
SUM_WEIGHTS = 0 ;

DO I = 1 TO N ;

  RESULT = ROW I COL RESULTS OF TABLE ( SRCTBL ) ;

  IF WEIGHTS <> EMPTY THEN DO ;
    WEIGHT = ROW I COL WEIGHTS OF TABLE ( SRCTBL ) ;
    RESULT = RESULT * WEIGHT ;
    SUM_WEIGHTS = SUM_WEIGHTS + WEIGHT ;
  END ;

  SUM_RESULTS = SUM_RESULTS + RESULT ;

END ;

IF WEIGHTS <> EMPTY THEN
  AVERAGE = SUM_RESULTS / SUM_WEIGHTS ;
ELSE DO ;
  AVERAGE = SUM_RESULTS / N ;
END ;

SET ROW (N/2+.5) COL NEW OF TABLE ( SRCTBL ) TO SIGFIG ( AVERAGE, 3 ) ;
```

```
DO I = M + 1 TO LROW - N + 1 BY M ;

  DO J = 1 TO M ;

    K = I - J ;
    L = I + N - M + J - 1 ;
    RESULT = ROW K COL RESULTS OF TABLE ( SRCTBL ) ;
    RESULT2 = ROW L COL RESULTS OF TABLE ( SRCTBL ) ;

    IF WEIGHTS <> EMPTY THEN DO ;
      WEIGHT = ROW K COL WEIGHTS OF TABLE ( SRCTBL ) ;
      WEIGHT2 = ROW L COL WEIGHTS OF TABLE ( SRCTBL ) ;
      RESULT = RESULT * WEIGHT ;
      RESULT2 = RESULT2 * WEIGHT2 ;
      SUM_WEIGHTS = SUM_WEIGHTS - WEIGHT + WEIGHT2 ;
    END ;

    SUM_RESULTS = SUM_RESULTS - RESULT + RESULT2 ;

  END ;

  IF WEIGHTS <> EMPTY THEN
    AVERAGE = SUM_RESULTS / SUM_WEIGHTS ;
  ELSE DO ;
    AVERAGE = SUM_RESULTS / N ;
  END ;

  SET ROW (N/2+I-.5) COL NEW OF TABLE ( SRCTBL ) TO SIGFIG ( AVERAGE, 3 ) ;

END ;

END ; /* of procedure */
```

```
>HEL 7,1
Password:

RSX-11M BL32   [1,54] System     RSX11M
07-JAN-83 11:37 Logged on Terminal TT7:

Good Morning

Welcome to RSX-11M V4.0 timesharing.



Last Sample      2398     as of    83-01-06, 07:00
Last Data Disk Backup              83-01-06, 07:00
Data Disk Last Packed     82-11-19;  2730 Free Blocks Left as of 83-01-06, 07:00

                          *** ATTENTION ***
Before running RS1 or DTR, type ACT /ALL. This lists tasks which are currently
active. If any two (2) of DTR, DTRTn, EDT, EDTTn, RPT, RS1 or RS1Tn, where n
is a number between 0 and 30, are active DO NOT run RS1 or DTR!!!!!
>SE DEF 70,1
>S AC/AL
. LDR.
MCR...
SHOT7
F11ACP
PMT...
QMG...
TT12
RS1T23
>MCR RS1
RS/1 10.07
Environment Canada - Serial #2565
EXPIRATION DATE:NONE
Title 'Chief's directory'
Owner: W.D.Gummer

#MAKE TABLE POPCON <GO>

TITLE OF TABLE?POPLAR CONTROL TABLE <GO>
ARE THERE ROW NAMES?Y <GO>
ARE THERE COLUMN HEADINGS?Y <GO>
ENTER COLUMNWISE?Y <GO>
NAME OF ROW 1=BORON <GO>
NAME OF ROW 2=TDS <GO>
NAME OF ROW 3=COND <GO>
NAME OF ROW 4=NEXT <GO>
COL 1 HEADING=COL NO.
IN POPLAR <GO>
COL 1 ROW 1=5 <GO>
COL 1 ROW 2=6 <GO>
COL 1 ROW 3=8 <GO>
COL 2 HEADING=EXIT <GO>
#DIS POPCON <GO>


POPCON 1C X 3R POPLAR CONTROL TABLE                    07/01/83 PAGE 1

          1 COL NO.
          IN POPLAR
---------------------
1. BORON        5
2. TDS          6
3. COND         8
```

```
#MAKE TABLE POPMOV <GO>

TITLE OF TABLE?POPLAR MOVING AVERAGE CONTROL <GO>
ARE THERE ROW NAMES?Y <GO>
ARE THERE COLUMN HEADINGS?Y <GO>
ENTER COLUMNWISE?Y <GO>
NAME OF ROW 1=5Y1Y <GO>
NAME OF ROW 2=5Y1M <GO>
NAME OF ROW 3=3Y1Y <GO>
NAME OF ROW 4=3Y1M <GO>
NAME OF ROW 5=3M1M <GO>
NAME OF ROW 6=NEXT <GO>
COL 1 HEADING=N <GO>
COL 1 ROW 1=40 <GO>
COL 1 ROW 2=40 <GO>
COL 1 ROW 3=24 <GO>
COL 1 ROW 4=24 <GO>
COL 1 ROW 5=3 <GO>
COL 2 HEADING=M <GO>
COL 2 ROW 1=8 <GO>
COL 2 ROW 2=1 <GO>
COL 2 ROW 3=8 <GO>
COL 2 ROW 4=1 <GO>
COL 2 ROW 5=1 <GO>
COL 3 HEADING=EXIT <GO>
#DIS POPMOV <GO>


POPMOV 2C X 5R POPLAR MOVING AVERAGE CONTROL         07/01/83 PAGE 1

         1 N  2 M

------------------
1. 5Y1Y   40    8
2. 5Y1M   40    1
3. 3Y1Y   24    8
4. 3Y1M   24    1
5. 3M1M    3    1

#CALL POPLAR <GO>

#LOGOUT <GO>

>T *.LST
```

SECTION 8.0

LINEAR REGRESSION

TDS vs Q

```
# <GO>
#MAKE GRAPH TDS_Q_310 FROM COL 'Q' OF POPLAR WHERE COL 13 > 2 AND COL 13 < 11 VS
COL 'TDS' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS TDS_Q_310 <GO>


                                    TDS_Q_310
          2000.+
               |
               |
          1500.++
               +
               +
          1000.+  +
               +++
               ++
           500.+++++                                       +
               +                                 +
               |+ ++
            0.+-------+-------+-------+-------+-------+-------+
               0.     500.    1000.   1500.   2000.   2500.   3000.

                 +   TDS




#FIT LINE TO CURVE 1 OF TDS_Q_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.197855*X +838.561


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                10/01/83 PAGE 1

   1 PARAMETER  2 VALUE     3 STANDARD  4 T-VALUE  5 SIG. LEV.
                            DEVIATION
----------------------------------------------------------------
1  INTERCEPT    838.561     18.2779     45.8784       0.0001
2  SLOPE         -0.197855   0.0580711  -3.40711      0.001
NUMBER OF DATA POINTS = 134

 8C X 2R ANALYSIS OF VARIANCE                           10/01/83 PAGE 1

   1 SOURCE    2 SUM OF            3 D.F.  4 MEAN    5 F VALUE
               SQUARES                     SQUARE
--------------------------------------------------------------
1  REGRESSION  501323.                  1  501323.    11.6084
2  RESIDUAL         5.700572E06       132   43186.2

 8C X 2R ANALYSIS OF VARIANCE                           10/01/83

   6 SIG. LEV.  7 MULT     8 STD DEV
                R-SQ       OF REGR
--------------------------------------
1        0.001  0.0808338    207.813
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
#MAKE GRAPH TDS_Q_LOG_310 FROM COL 'Q_LOG' WHE\EHW\OF POPLAR WHERE COL 13 > 2 A
COL 13 < 11 VS COL 'TDS' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS TDS_Q_LOG_310 <GO>


                                TDS_Q_LOG_310
          2000.+
               |
               |
          1500.+               +       +
               |             +
               |               +   +
          1000.+  ++ + ++++++ +  +            +
               |      +++++++  ++   +   +   ++
               |         + +  ++  +      ++
           500.+              +     +++ +  +  ++            +
               |            +                             +
               |                        +     ++
             0.+----+----+----+----+----+----+----+----+----+
              -1.   0.   1.   2.   3.   4.   5.   6.   7.   8.

                 +   TDS




#FIT LINE TO CURVE 1 OF TDS_Q_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -78.4709*X +975.715


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                            10/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    975.715     24.0886    40.5052         0.0001
2  SLOPE        -78.4709     9.78453   -8.01989        0.0001
NUMBER OF DATA POINTS = 134

 8C X 2R ANALYSIS OF VARIANCE                       10/01/83 PAGE 1

   1 SOURCE     2 SUM OF      3 D.F.   4 MEAN           5 F VALUE
                SQUARES                SQUARE
---------------------------------------------------------------
1  REGRESSION  2.031887E06        1       2.031887E06    64.3186
2  RESIDUAL    4.170008E06      132   31591.

 8C X 2R ANALYSIS OF VARIANCE                       10/01/83

   6 SIG. LEV.  7 MULT     8 STD DEV
                R-SQ       OF REGR
------------------------------------
1       0.0001  0.327624    177.738
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
#MAKE GRAPH TDS_LOG_Q_310 FROM COL 'Q' OF POPLAR WHERE COL 13 > 2 AND COL 13 <
VS COL 'TDS_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS TDS_LOD_Q_310 <GO>
TABLE:TDS_LOD_Q_310

ERROR #194 Cannot display--No graph or table by that name.


#DIS TDS_LOG_Q_310 <GO>


                                 TDS_LOG_Q_310
             8.+
               |
               ++
             7.+  +
               +++
               +++++                                            +
             6.++                               +
               |
               |  ++
             5.+
               |+
               |
             4.+-------+-------+-------+-------+-------+-------+
               0.    500.    1000.   1500.   2000.   2500.   3000.

                 +   TDS_LOG




#FIT LINE TO CURVE 1 OF TDS_LOG_Q_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.000321976*X +6.68493


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                    10/01/83 PAGE 1

   1 PARAMETER  2 VALUE       3 STANDARD  4 T-VALUE  5 SIG. LEV.
                              DEVIATION
-----------------------------------------------------------------
1  INTERCEPT      6.68493     0.0317079   210.829     0.0001
2  SLOPE        -0.000321976  0.00010074   -3.19611   0.00174308
NUMBER OF DATA POINTS = 134

 8C X 2R ANALYSIS OF VARIANCE                               10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN     5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
------------------------------------------------------------------
1  REGRESSION    1.32761        1  1.32761     10.2151       0.00174
2  RESIDUAL     17.1554       132  0.129965

 8C X 2R ANALYSIS OF VARIANCE                               10/01/83

   7 MULT      8 STD DEV
   R-SQ        OF REGR
------------------------
1  0.0718286   0.360507
2
```

```
#MAKR\R\E GRAPH TDS_LOG_Q_LOG_310 FROM COL 'Q_LOG' OF POPLAR WHERE COL 13 > 2
COL 13 < 11 VS COL 'TDS_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS TDS_LOG_Q_LOG_310 <GO>


                                 TDS_LOG_Q_LOG_310
                8.+
                  :
                  :               +       +
                7.+  ++ +  ++++++++ + +          +
                  :  +   +++++++ +++ + +   +++ ++
                  :         + +  +     +++ +  +  ++            +
                6.+            +         + +                 +
                  :
                  :                              ++
                5.+
                  :                        +
                  :
                4.+----+----+----+----+----+----+----+----+----+
                 -1.   0.   1.   2.   3.   4.   5.   6.   7.   8.

                    +   TDS_LOG



#FIT LINE TO CURVE 1 OF TDS_LOG_Q_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.138618*X +6.92884


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                10/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE  5 SIG. LEV.
                           DEVIATION
-----------------------------------------------------------------
1  INTERCEPT     6.92884    0.0411053  168.563        0.0001
2  SLOPE        -0.138618   0.0166965   -8.30223      0.0001
NUMBER OF DATA POINTS = 134

 8C X 2R ANALYSIS OF VARIANCE                           10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
----------------------------------------------------------------------
1  REGRESSION   6.34049       1  6.34049      68.9269       0.0001
2  RESIDUAL    12.1425      132  0.0919886

 8C X 2R ANALYSIS OF VARIANCE                           10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.343045   0.303296
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
#MAKE GRAPH TDS_Q_ALL FROM COL 'Q' OF POPLAR VS COL 'TDS' <GO>

#DIS TDS_Q_ALL <GO>


                                   TDS_Q_ALL
          2000.+
               |
               |
          1500.++
               +
               +
          1000.+  +
               +++
               ++
           500.+++++                                          +
               +                                + 
               |+ ++
             0.+-------+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   TDS



#MAKE GRAPH COND_Q_ALL FROM COL 'Q' V\V\OF POPLAR VS COL 'COND' <GO>

#DIS COND_Q_ALL <GO>


                                   COND_Q_ALL
          3000.+
               |
               |
               |+
          2000.+
               +
               +  +
               +++
          1000.+  +
               +++ +                                          +
               +                                +
               |+ ++
             0.+-------+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   COND



#
```

```
 MAKE GRAPH TDS_Q_LOG_ALL FROM COL 'Q_LOG' OF POPLAR VS COL 'TDS' <GO>

#DIS TDS_Q_LOG_ALL <GO>


                                TDS_Q_LOG_ALL
          2000.+
               |
               |
          1500.+                  +      +
               |                +
               |   +  + +  ++     +  +
          1000.+      ++++++++++++  +          +
               |     ++   ++++++  ++  ++  +   +
               |             ++  ++  +     +
           500.+                 +    +++++  + + +          +
               |               +                          +
               |                          +     ++
             0.+--------+--------+--------+--------+--------+
              -2.      0.       2.       4.       6.       8.

                 +   TDS



#FIT LINE TO CURVE 1 OF TDS_Q_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        -82.0791*X +992.43


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                07/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
----------------------------------------------------------------
1  INTERCEPT    992.43      16.7555     59.2303       0.0001
2  SLOPE        -82.0791     7.86044   -10.442        0.0001
NUMBER OF DATA POINTS = 190

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83 PAGE 1

   1 SOURCE     2 SUM OF      3 D.F.  4 MEAN            5 F VALUE
                SQUARES               SQUARE
------------------------------------------------------------------
1  REGRESSION  2.747915E06       1       2.747915E06    109.036
2  RESIDUAL    4.737958E06     188   25201.9

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83

   6 SIG. LEV.  7 MULT    8 STD DEV
                R-SQ      OF REGR
-------------------------------------
1       0.0001  0.36708    158.751
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
 MAKE GRAPH TDS_LOG_Q_ALL FROM COL 'Q' OF POPLAR VS COL 'TDS_LOG' <GO>

#DIS TDS_LOG_Q_ALL <GO>


                                 TDS_LOG_Q_ALL
             8.+
               ¦
               ++
             7.+  +
               +++
               +++++                                          +
             6.++                               +
               ¦
               ¦  ++
             5.+
               ¦+
               ¦
             4.+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   TDS_LOG



#MAKE GRAPH COND_LOG_Q_ALL FROM COL 'Q' OF POPLAR VS COL 'COND_LOG' <GO>

#DIS COND_LOG_Q_ALL <GO>


                                 COND_LOG_Q_ALL
             8.+
               ++
               +
               + ++
             7.+++
               ++ ++                                          +
               ¦++
               +                                +
             6.+
               ¦  ++
               ¦
               ¦+
             5.+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   COND_LOG




#
```

```
 MAKE GRAPH TDS_LOG_Q_LOG_ALL FROM COL 'Q_LOG' OF POPLAR VS COL 'TDS_LOG' <GO>

#DIS TDS_LOG_Q_LOG_ALL <GO>


                              TDS_LOG_Q_LOG_ALL
             8.+
               ¦
               ¦                  +      +
             7.+   +  +++++++++++++ ++         +
               ¦     ++   ++++++ +++ +++  ++  +
               ¦             ++  +    +++++  + + +          +
             6.+               +         ++               +
               ¦
               ¦                                ++
             5.+
               ¦                          +
               ¦
             4.+---------+---------+---------+---------+---------+
              -2.       0.       2.       4.       6.       8.

                 +   TDS_LOG




#FIT LINE TO CURVE 1 OF TDS_LOG_Q_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.137861*X +6.93608


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             07/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE  5 SIG. LEV.
                           DEVIATION
--------------------------------------------------------------

1  INTERCEPT     6.93608    0.0275938   251.364        0.0001
2  SLOPE        -0.137861   0.012945    -10.6497       0.0001
NUMBER OF DATA POINTS = 190

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN     5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
-------------------------------------------------------------------

1  REGRESSION    7.7521       1  7.7521       113.416       0.0001
2  RESIDUAL     12.85       188  0.0683508

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------

1  0.376278    0.26144
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

SECTION 9.0

LINEAR REGRESSION

B vs Q

```
#MAKE GRAPH B_Q_310 FROM COL 'Q' OF POPLAR WHERE COL 13 > 2 AND COL 13 < 11 VS
COL 'B' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_Q_310 <GO>


                                    B_Q_310
             4.+
               !
               !
             3.++
               +
               +
             2.+
               ++++
               +++
             1.++ ++
               +++                              +             +
               !  ++
              0++------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   B




#FIT LINE TO CURVE 1 OF B_Q_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.00048503*X +1.66281


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             10/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD   4 T-VALUE  5 SIG. LEV.
                             DEVIATION
-----------------------------------------------------------------
1  INTERCEPT     1.66281     0.0437346     38.0205        0.0001
2  SLOPE        -0.00048503  0.000137962  -3.51569        0.001
NUMBER OF DATA POINTS = 132

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN    5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
------------------------------------------------------------------
1  REGRESSION   3.01002       1  3.01002       12.36         0.001
2  RESIDUAL    31.6587      130  0.243529

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
------------------------
1  0.0868223   0.493486
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
#MAKE GRAPH B_Q_LOG_310 FROM COL 'Q_LOG' OF POPLAR WHERE COL 13 > 2 AND COL 13
VS COL 'B' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_Q_LOG_310 <GO>


                                 B_Q_LOG_310
             4.+
               |
               |
             3.+        +      +       +
               |             + +
               |      ++ +     +   +
             2.+  ++ + ++++      +
               |  +     +++++ +     +   +   + +
               |         ++++ +++   +   ++ + +
             1.+           +  ++  + +++   +   ++
               |                    + + +  +              + +
               |                              ++
              0+----+----+----+----+----+----+----+----+----+
             -1.   0.   1.   2.   3.   4.   5.   6.   7.   8.

                 +   B




#FIT LINE TO CURVE 1 OF B_Q_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.205422*X +2.02494


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                   10/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE  5 SIG. LEV.
                            DEVIATION
-----------------------------------------------------------------
1  INTERCEPT     2.02494    0.0547079   37.0136        0.0001
2  SLOPE        -0.205422   0.0221447   -9.27638       0.0001
NUMBER OF DATA POINTS = 132

 8C X 2R ANALYSIS OF VARIANCE                              10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
                SQUARES            SQUARE
----------------------------------------------------------------------
1  REGRESSION   13.8082       1   13.8082      86.0512        0.0001
2  RESIDUAL     20.8605     130    0.160465

 8C X 2R ANALYSIS OF VARIANCE                              10/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
------------------------
1  0.398291   0.400581
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
```

```
MAKE GRAPH B_LOG_Q_310 FROM COL 'Q' OF POPLAR WHERE COL 13 > 2 AND COL 13 < 11
COL 'B_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_LOG_Q_310 <GO>


                                   B_LOG_Q_310
              3.+
                !
                !
                !
              1.++
                ++++
                +++++
                !                                +             +
             -1.+  +
                !   +
                !+
                !
             -3.+-------+-------+-------+-------+-------+-------+
                0.     500.   1000.   1500.   2000.   2500.   3000.

                  +   B_LOG



#FIT LINE TO CURVE 1 OF B_LOG_Q_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.000422546*X +0.441631


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                 10/01/83 PAGE 1

   1 PARAMETER  2 VALUE       3 STANDARD  4 T-VALUE  5 SIG. LEV.
                              DEVIATION
------------------------------------------------------------------
1  INTERCEPT     0.441631     0.0385415   11.4586        0.0001
2  SLOPE        -0.000422546  0.00012158  -3.47545       0.001
NUMBER OF DATA POINTS = 132

 8C X 2R ANALYSIS OF VARIANCE                            10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN     5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
-------------------------------------------------------------------
1  REGRESSION   2.28445        1  2.28445    12.0788          0.001
2  RESIDUAL    24.5868       130  0.189129

 8C X 2R ANALYSIS OF VARIANCE                            10/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
--------------------------
1  0.0850148   0.43489
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
```

```
#MAKE GRAPH B_LOG_Q_LOG_310 FROM COL 'Q_LOG' OF POPLAR WHERE COL 13 > 2 AND CO
< 11 VS COL 'B_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_LOG_Q_LOG_310 <GO>


                               B_LOG_Q_LOG_310
             3.+
               !
               !
               !
             1.+      ++++    + +   +   +
               !  ++ + ++++++ ++++  +   ++ ++++
               !           +  ++  + +++ + ++  ++
               !                                          + +
            -1.+                              ++
               !                               +
               !                        +
               !
            -3.+----+----+----+----+----+----+----+----+----+
              -1.   0.   1.   2.   3.   4.   5.   6.   7.   8.

                 +   B_LOG



#FIT LINE TO CURVE 1 OF B_LOG_Q_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
       -0.185866*X +0.770257


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                               10/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE  5 SIG. LEV.
                           DEVIATION
-----------------------------------------------------------------
1  INTERCEPT      0.770257   0.0472596   16.2984        0.0001
2  SLOPE         -0.185866   0.0191297   -9.71608       0.0001
NUMBER OF DATA POINTS = 132

 8C X 2R ANALYSIS OF VARIANCE                          10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN     5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
----------------------------------------------------------------------
1  REGRESSION   11.3043      1    11.3043      94.402       0.0001
2  RESIDUAL     15.567     130     0.119746

 8C X 2R ANALYSIS OF VARIANCE                          10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
--------------------------
1  0.420683   0.346043
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
```

```
#MAKE GRAPH B_Q_ALL FROM COL 'Q' OF POPLAR VS COL 'B' <GO>

#DIS B_Q_ALL <GO>


                                    B_Q_ALL
             4.+
               :
               :
             3.++
               +
               +
             2.+
               ++++
               +++
             1.++ ++
               +++                                +             +
               :  ++
              0++------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   B




#FIT POLYNOMIAL OF DEGREE 2 TO CURVE 1 OF P\P\B_Q_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        0.00000119057*X**2 -0.0036231*X +1.77628


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 3R PARAMETER TABLE                                07/01/83 PAGE 1

   1 DEGREE     2 VALUE          3 STANDARD    4 T-VALUE  5 SIG. LEV.
   COEFFICIENT                   DEVIATION
----------------------------------------------------------------------
1            0   1.77628         0.0315318      56.3331        0.0001
2            1  -0.0036231       0.000557272    -6.50149       0.0001
3            2   0.00000119057   2.094498E-07    5.68428       0.0001
NUMBER OF DATA POINTS = 189

POLYNOMIAL FIT FOR DEGREE = 2

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN     5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
-------------------------------------------------------------------
1  REGRESSION   9.03198        2  4.51599     26.5614       0.0001
2  RESIDUAL    31.6239       186  0.170021

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
-------------------------
1  0.222157   0.412336
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
```

```
 MAKE GRAPH B_Q_LOG_ALL FROM COL 'Q_LOG' OF POPLAR VS COL 'B' <GO>

#DIS  B_Q_LOG_ALL <GO>


                                 B_Q_LOG_ALL
             4.+
               ¦
               ¦
             3.+           +      +      +
               ¦                + +
               ¦   +  + + ++++    +  +
             2.+     +++++++++      +
               ¦      + + ++++++++     +  +   ++
               ¦             +++ +++  +   ++ ++
             1.+              +  ++  +++++ +   + +
               ¦                      + + +  +            + +
               ¦                                ++
              0+--------+--------+--------+--------+--------+
              -2.       0.       2.       4.       6.       8.

                 +   B




#FIT LINE TO CURVE 1 OF B_Q_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.20578*X +2.02383


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                07/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT     2.02383  0.0373804    54.1413       0.0001
2  SLOPE        -0.20578  0.0175544   -11.7224       0.0001
NUMBER OF DATA POINTS = 189

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN     5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
-------------------------------------------------------------------
1  REGRESSION   17.2209       1  17.2209      137.415       0.0001
2  RESIDUAL     23.435      187   0.125321

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
-----------------------
1  0.423578   0.354007
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
 MAKE GRAPH B_LOG_Q_ALL FROM COL 'Q' OF POPLAR VS COL 'B_LOG' <GO>

#DIS B_LOG_Q_ALL <GO>


                                  B_LOG_Q_ALL
             3.+
               |
               |
               |
             1.++
               ++++
               +++++
               |                                +             +
            -1.+  +
               |   +
               |+
               |
            -3.+-------+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   B_LOG



#MAKE GRAPH TDS_LOG_COND_ALL FROM COL 'COND' OF POPLAR VS COL 'TDS_LOG' <GO>

#DIS TDS_LOG_COND_ALL <GO>


                                TDS_LOG_COND_ALL
             8.+
               |
               |                                +   +
             7.+                   +++++++ + +
               |               +++++++++++++
               |           ++++  +   +
             6.+        + ++
               |
               |    +
             5.+
               |  +
               |
             4.+-------+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   TDS_LOG




#
```

```
 MAKE GRAPH B_LOG_Q_LOG_ALL FROM COL 'Q_LOG' OF POPLAR VS COL 'B_LOG' <GO>

#DIS B_LOG_Q_LOG_ALL <GO>


                               B_LOG_Q_LOG_ALL
             3.+
               |
               |
               |
             1.+   +  + + ++++  + +  +   +
               |     ++++++++++++++++ ++  ++ +++
               |              +  ++  +++++++ + + +
               |                                         + +
            -1.+                                0
               |                                 +
               |                          +
               |
            -3.+--------+--------+--------+--------+--------+
              -2.      0.       2.       4.       6.       8.

                 +   B_LOG




#FIT LINE TO CURVW\W\E 1 OF B_LOG_Q_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.179869*X +0.754965


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                              07/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE  5 SIG. LEV.
                           DEVIATION
--------------------------------------------------------------

1  INTERCEPT     0.754965   0.031319     24.1057       0.0001
2  SLOPE        -0.179869   0.0147078   -12.2295       0.0001
NUMBER OF DATA POINTS = 189

 8C X 2R ANALYSIS OF VARIANCE                         07/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
--------------------------------------------------------------------

1  REGRESSION   13.1571        1  13.1571       149.559       0.0001
2  RESIDUAL     16.4509      187   0.0879728

 8C X 2R ANALYSIS OF VARIANCE                         07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------

1  0.444376   0.296602
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

SECTION 10.0

LINEAR REGRESSION

B vs TDS

```
 MAKE GRAPH B_TDS_310 FROM COL 'TDS' OF POPLAR WHERE COL 'MONTH' >2 AND
COL 'MONTH' < 11 VS COL 'B' WHERE COL 'MONTH' , 2\2 ,\>2 AND COL 13 < 11 <GO>

#DIS B_TDS_310 <GO>


                                   B_TDS_310
             4.+
               |
               |
             3.+                      +          + +
               |                           +  +
               |                  + ++     +
             2.+                   ++++++
               |               + ++++++++
               |               +++++++
             1.+          +++++++
               |       +  +++
               |   ++
              0+-+---------+-----------+-----------+-----------+
               0.         500.       1000.       1500.       2000.

                 +   B




#FIT LINE TO CURVE 1 OF B_TDS_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        0.00219465*X -0.182564


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                               10/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD    4 T-VALUE  5 SIG. LEV.
                             DEVIATION
------------------------------------------------------------------
1  INTERCEPT    -0.182564    0.0755671     -2.41593    0.0170943
2  SLOPE         0.00219465  0.0000883083  24.8521     0.0001
NUMBER OF DATA POINTS = 131

 8C X 2R ANALYSIS OF VARIANCE                          10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN       5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  28.5858       1   28.5858       617.625       0.0001
2  RESIDUAL     5.97057     129   0.0462835

 8C X 2R ANALYSIS OF VARIANCE                          10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-------------------------
1  0.827222   0.215136
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
#MAKE GRAPH B_TDS_LOG_310 FROM COL 'TDS_LOG' OF POPLAR WHERE COL 13 > 2 AND CO
< 11 VS COL 'B' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_TDS_LOG_310 <GO>


                                 B_TDS_LOG_310
             4.+
               :
               :
             3.+                                 +    ++
               :                                    ++
               :                               +++  +
             2.+                               +++++
               :                             + ++++
               :                             +++++
             1.+                         ++++++
               :                     +   ++
               :              +
              0+-----++----+-----+-----+-----+-----+-----+-----+
               4.   4.5    5.   5.5    6.   6.5    7.   7.5    8.

                 +   B




#FIT LINE TO CURVE 1 OF B_TDS_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        1.18528*X -6.26877


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                               10/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    -6.26877  0.433556    -14.4589       0.0001
2  SLOPE         1.18528  0.0649075    18.2611       0.0001
NUMBER OF DATA POINTS = 131

 8C X 2R ANALYSIS OF VARIANCE                          10/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN       5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  24.9179         1  24.9179       333.496       0.0001
2  RESIDUAL     9.63851      129   0.0747171

 8C X 2R ANALYSIS OF VARIANCE                          10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-------------------------
1  0.721079   0.273344
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#_<GO>
```

```
 MAKE GRAPH B_LOG_TDS FROM^U
MAKE GRAPH B_LOG_TDS_310 FROM COL 'TDS' OF POPLAR WHERE COL 13 > 2 AND COL 13
VS COL 'B_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_LOG \ \_TDS_310 <GO>


                                 B_LOG_TDS_310
             3.+
               !
               !
               !
             1.+                  + +++    +  +  + +
               !               ++++++++++
               !          ++++++++
               !       +    +
            -1.+   ++
               !    +
               ! +
               !
            -3.+-----------+-----------+-----------+-----------+
               0.         500.       1000.       1500.       2000.

                 +   B_LOG




#FIT LINE TO CURVE 1 OF B_LOG_TDS_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        0.00191509*X -1.16969


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                              10/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD    4 T-VALUE  5 SIG. LEV.
                             DEVIATION
------------------------------------------------------------------
1  INTERCEPT    -1.16969     0.0697055     -16.7804       0.0001
2  SLOPE         0.00191509  0.0000814584   23.5101       0.0001
NUMBER OF DATA POINTS = 131

 8C X 2R ANALYSIS OF VARIANCE                         10/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  21.7671         1  21.7671       552.72        0.0001
2  RESIDUAL     5.08025      129   0.0393817

 8C X 2R ANALYSIS OF VARIANCE                         10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.810773   0.198448
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
```

```
#MAKE GRAPH B_LOG_TDS_LOG_310 FROM COL 'TDS_LOG' OF POPLAR WHERE COL 13 > 2 AN
COL 13 < 11 VS COL 'B_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS B_LOG_TDS_LOG_310 <GO>


                               B_LOG_TDS_LOG_310
             3.+
               |
               |
               |
             1.+                               +++  ++++
               |                             +++++++
               |                         ++++++
               |                     +    +
            -1.+              +
               |              +
               |      +
               |
            -3.+-----+-----+-----+-----+-----+-----+-----+-----+
               4.   4.5    5.   5.5    6.   6.5    7.   7.5    8.

                 +   B_LOG



#FIT LINE TO CURVE 1 OF B_LOG_TDS_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        1.18412*X -7.47985


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             10/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    -7.47985   0.196416    -38.0817       0.0001
2  SLOPE         1.18412   0.0294053    40.2689       0.0001
NUMBER OF DATA POINTS = 131

 8C X 2R ANALYSIS OF VARIANCE                       10/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION   24.8691       1  24.8691       1621.73       0.0001
2  RESIDUAL      1.9782     129   0.0153349

 8C X 2R ANALYSIS OF VARIANCE                       10/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.926316   0.123834
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
                                   B_TDS_ALL
             4.+
               |
               |
             3.+                      +          + +
               |                           +  +
               |                  + +++++ ++
             2.+                  +++++++++
               |               + ++++++++   +
               |               ++++++++
             1.+          ++++++++
               |       +  +++
               |   ++
              0+-+---------+-----------+-----------+-----------+
               0.        500.       1000.       1500.       2000.

                 +   B



#FIT LINE TO CURVE 1 OF B_TDS_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        0.00207981*X -0.0971283


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             07/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD    4 T-VALUE  5 SIG. LEV.
                             DEVIATION
------------------------------------------------------------------
1  INTERCEPT    -0.0971283   0.0742682      -1.3078     0.192559
2  SLOPE         0.00207981  0.0000835178    24.9026     0.0001
NUMBER OF DATA POINTS = 187

 8C X 2R ANALYSIS OF VARIANCE        -               07/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  31.1205        1  31.1205       620.136        0.0001
2  RESIDUAL     9.28393     185   0.0501834

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.770225   0.224017
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
 MAKE GRAPH B_TDS_LOG_ALL FROM COL 'TDS_LOG' OF POPLAR VS COL 'B' <GO>

#DIS B_TDS_LOG_ALL <GO>


                                 B_TDS_LOG_ALL
             4.+
               :
               :
             3.+                                 +    ++
               :                                    ++
               :                               ++++++
             2.+                               +++++
               :                             + ++++ +
               :                             +++++
             1.+                         ++++++
               :                     +   ++
               :              +
              0+-----++----+-----+-----+-----+-----+-----+-----+
               4.   4.5    5.   5.5    6.   6.5    7.   7.5    8.

                 +   B




#FIT LINE TO CURVE 1 OF B_TDS_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        1.18957*X -6.29429


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             07/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    -6.29429   0.391959    -16.0586       0.0001
2  SLOPE         1.18957   0.0582067    20.4369       0.0001
NUMBER OF DATA POINTS = 187

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION   28.0075       1  28.0075       417.954       0.0001
2  RESIDUAL     12.397      185   0.0670109

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.693177   0.258865
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
 MAKE GRAPH B_LOG_TDS_ALL FROM COL 'TDS' OF POPLAR VS COL 'B_LOG' <GO>

#DIS B_LOG_TDS_ALL <GO>


                                 B_LOG_TDS_ALL
             3.+
               |
               |
               |
             1.+                  + +++++ ++  +  + +
               |               ++++++++++++ +
               |          ++++++++
               |       +    +
            -1.+   ++
               |    +
               | +
               |
            -3.+-----------+-----------+-----------+-----------+
               0.         500.        1000.       1500.       2000.

                 +   B_LOG




#FIT LINE TO CURVE 1 OF B_LOG_TDS_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        0.0017769*X -1.06387


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                07/01/83 PAGE 1

   1 PARAMETER  2 VALUE     3 STANDARD    4 T-VALUE  5 SIG. LEV.
                            DEVIATION
------------------------------------------------------------------
1  INTERCEPT    -1.06387    0.0635595     -16.7382       0.0001
2  SLOPE         0.0017769  0.0000714754   24.8603       0.0001
NUMBER OF DATA POINTS = 187

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
---------------------------------------------------------------------
1  REGRESSION  22.7156        1  22.7156       618.029       0.0001
2  RESIDUAL     6.79966     185   0.0367549

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.769622   0.191716
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
 MAKE GRAPH B_LOG_TDS_LOG_ALL FROM COL 'TDS_LOG' OF POPLAR VS COL 'B_LOG' <GO>

#DIS B+LOG\GOL+\_LOG_TDS_LOG_ALL <GO>


                               B_LOG_TDS_LOG_ALL
             3.+
               :
               :
               :
             1.+                               +++++++++
               :                             ++++++++
               :                         ++++++
               :                     +    +
            -1.+              +
               :              +
               :      +
               :
            -3.+-----+-----+-----+-----+-----+-----+-----+-----+
               4.   4.5    5.   5.5    6.   6.5    7.   7.5    8.

                 +   B_LOG




#FIT LINE TO CURVE 1 OF B_LOG_TDS_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        1.15757*X -7.30854


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             07/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    -7.30854   0.192635    -37.9399       0.0001
2  SLOPE         1.15757   0.0286067    40.4649       0.0001
NUMBER OF DATA POINTS = 187

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
--------------------------------------------------------------------
1  REGRESSION  26.5209        1  26.5209       1638.53        0.0001
2  RESIDUAL     2.99437     185   0.0161858

 8C X 2R ANALYSIS OF VARIANCE                        07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
-----------------------
1  0.898548   0.127223
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

SECTION 11.0

LINEAR REGRESSION

COND vs Q

```
#MAKE GRAPH COND_Q_310 FROM COL 'Q' OF POPLAR WHERE 1\1\COL 13 > 2 AND COL 13
VS COL 'COND' WHERE COL 13 > 2 AM\M\ND COL 13 < 11 <GO>

#DIS COND_Q_310 <GO>


                                   COND_Q_310
          3000.+
               !
               !
               !+
          2000.+
               +
               +  +
               +++
          1000.+  +
               +++ +                                           +
               +                                 +
               !+ ++
             0.+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   COND




#FIT LINE TO CURVE 1 OF COND_Q_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.295395*X +1305.14


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                10/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD  4 T-VALUE  5 SIG. LEV.
                             DEVIATION
----------------------------------------------------------------
1  INTERCEPT    1305.14      27.7945      46.9568         0.0001
2  SLOPE          -0.295395   0.0859595   -3.43644         0.001
NUMBER OF DATA POINTS = 127

 8C X 2R ANALYSIS OF VARIANCE                           10/01/83 PAGE 1

   1 SOURCE    2 SUM OF     3 D.F.  4 MEAN           5 F VALUE
               SQUARES              SQUARE
---------------------------------------------------------------
1  REGRESSION  1.116275E06      1      1.116275E06    11.8091
2  RESIDUAL    1.181583E07    125  94526.7

 8C X 2R ANALYSIS OF VARIANCE                           10/01/83

   6 SIG. LEV.  7 MULT     8 STD DEV
                R-SQ       OF REGR
-------------------------------------
1        0.001  0.0863181    307.452
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
```

```
#MAKE GRAPH COND_Q_LOG_310 FROM COL 'Q_LOG' OF POPLAR WHERE COL 13 > 2 AND COL
< 11 VS COL 'COND' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS COND_Q_LOG_310 <GO>


                               COND_Q_LOG_310
          3000.+
               :
               :
               :                       +
          2000.+             + +
               :       +       + + +
               :  ++  +++++++ +               +
               :     + ++++++ +++   +   + ++++
          1000.+         + ++ ++  + +         +
               :              +      ++ +  +   +            +
               :            +                             +
               :                        +     ++
             0.+----+----+----+----+----+----+----+----+----+
              -1.   0.   1.   2.   3.   4.   5.   6.   7.   8.

                 +   COND




#FIT LINE TO CURVE 1 OF COND _\_ \_Q_LOG_341\14\10^R
FIT LINE TO CURVE 1 OF COND_Q_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -109.995*X +1494.56


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             10/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    1494.56      37.0187   40.3732        0.0001
2  SLOPE        -109.995     14.9899   -7.33795       0.0001
NUMBER OF DATA POINTS = 127

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83 PAGE 1

   1 SOURCE    2 SUM OF     3 D.F.  4 MEAN          5 F VALUE
               SQUARES              SQUARE
---------------------------------------------------------------
1  REGRESSION  3.893504E06       1      3.893504E06    53.8455
2  RESIDUAL    9.038603E06     125  72308.8

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83

   6 SIG. LEV.  7 MULT    8 STD DEV
                R-SQ      OF REGR
------------------------------------
1       0.0001  0.301073    268.903
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
```

```
 MAKE GRAPH COND_LOG_Q_310 FROM COL 'Q' OF POPLAR WHERE COL 13 > 2 AND COL 13 <
VS COL 'COND_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS COND_LOG_Q_310 <GO>


                                 COND_LOG_Q_310
             8.+
               ++
               +
               + ++
             7.+++
               ++ ++                                          +
               ¦++
               +                                +
             6.+
               ¦  ++
               ¦
               ¦+
             5.+-------+-------+-------+-------+-------+-------+
               0.     500.   1000.   1500.   2000.   2500.   3000.

                 +   COND_LOG




#FIT LINE TO CURVE 1 OF COND_LOG_Q_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.00030619*X +7.13143


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                              10/01/83 PAGE 1

   1 PARAMETER  2 VALUE      3 STANDARD    4 T-VALUE  5 SIG. LEV.
                             DEVIATION
------------------------------------------------------------------
1  INTERCEPT     7.13143     0.0311503     228.936     0.0001
2  SLOPE        -0.00030619  0.0000963381   -3.17828   0.00186604
NUMBER OF DATA POINTS = 127

 8C X 2R ANALYSIS OF VARIANCE                         10/01/83 PAGE 1

   1 SOURCE     2 SUM OF  3 D.F.  4 MEAN   5 F VALUE  6 SIG. LEV.
                SQUARES           SQUARE
-----------------------------------------------------------------
1  REGRESSION    1.19936       1  1.19936    10.1015      0.00187
2  RESIDUAL     14.8413      125  0.11873

 8C X 2R ANALYSIS OF VARIANCE                         10/01/83

   7 MULT     8 STD DEV
   R-SQ       OF REGR
------------------------
1  0.0747698   0.344573
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
# <GO>
```

```
#MAKE GRAPH COND_LOG_Q_LOG_310 FROM COL 'Q_LOG' OF POPLAR WHERE COL 13 > 2 AND
< 11 VS COL 'COND_LOG' WHERE COL 13 > 2 AND COL 13 < 11 <GO>

#DIS COND_LOG_Q_LOG_310 <GO>


                             COND_LOG_Q_LOG_310
             8.+
               !               +       +
               !      ++ +   + + + +
               !  ++ + ++++++ ++    +       +++
             7.+       + + ++ +++ +     + ++ +
               !           +  +     + +       ++            +
               !                     ++ +  +
               !            +                             +
             6.+
               !                              ++
               !
               !                        +
             5.+----+----+----+----+----+----+----+----+----+
              -1.   0.   1.   2.   3.   4.   5.   6.   7.   8.

                 +   COND_LOG




#FIT LINE TO CURVE 1 OF COND_LOG_Q_LOG_310 <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.126045*X +7.35049


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                             10/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE  5 SIG. LEV.
                           DEVIATION
--------------------------------------------------------------
1  INTERCEPT     7.35049    0.0407044  180.582         0.0001
2  SLOPE        -0.126045   0.0164824   -7.64727       0.0001
NUMBER OF DATA POINTS = 127

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83 PAGE 1

   1 SOURCE    2 SUM OF  3 D.F.  4 MEAN     5 F VALUE  6 SIG. LEV.
               SQUARES           SQUARE
-------------------------------------------------------------------
1  REGRESSION   5.11264       1  5.11264      58.4808       0.0001
2  RESIDUAL    10.928       125  0.0874242

 8C X 2R ANALYSIS OF VARIANCE                        10/01/83

   7 MULT   8 STD DEV
   R-SQ     OF REGR
----------------------
1  0.31873   0.295676
2

        ANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
               save the ANOVA table? N <GO>
                 ve the Parameter table? N <GO>
                     he Residuals table? N <GO>
```

```
 MAKE GRAS\S\PH COND_LOG_Q_LOG_ALL FROM COL 'Q_LOG' OF POPLAR VS COL 'COND_LOG

#DIS COND_LOG_Q_LOG_ALL <GO>


                             COND_LOG_Q_LOG_ALL
             8.+
               |                  +      +
               |   +  +   ++++  + + ++
               |     ++++++++++++++   ++      ++
             7.+           + +++ +++ +    ++ ++
               |              +  +    + ++     + +          +
               |                        +++  +
               |               +                          +
             6.+
               |                                ++
               |
               |                          +
             5.+--------+--------+--------+--------+--------+
              -2.       0.       2.       4.       6.       8.

                 +   COND_LOG



#FIT LINE TO CURVE 1 OF COND_LOG_Q_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        -0.123802*X +7.35234


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                                07/01/83 PAGE 1

   1 PARAMETER  2 VALUE    3 STANDARD  4 T-VALUE  5 SIG. LEV.
                           DEVIATION
-----------------------------------------------------------------

1  INTERCEPT     7.35234   0.0268002   274.339        0.0001
2  SLOPE        -0.123802  0.0126153    -9.8136       0.0001
NUMBER OF DATA POINTS = 183

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83 PAGE 1

   1 SOURCE     2 SUM OF   3 D.F.  4 MEAN      5 F VALUE  6 SIG. LEV.
                SQUARES            SQUARE
----------------------------------------------------------------------

1  REGRESSION   6.08165       1  6.08165      96.3067        0.0001
2  RESIDUAL    11.4299      181  0.0631488

 8C X 2R ANALYSIS OF VARIANCE                           07/01/83

   7 MULT    8 STD DEV
   R-SQ      OF REGR
--------------------------

1  0.347293   0.251294
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```

```
 MAKE GRAPH COND_Q_LOG_ALL FROM COL 'Q_LOG' OF POPLAR VS COL 'COND' <GO>

#DIS COND_Q_LOG_ALL <GO>


                               COND_Q_LOG_ALL
          3000.+
               :
               :
               :                         +
          2000.+                +  +
               :   +  +    ++     +  ++
               :     ++++ ++++++++             +
               :         +++++++ +++  ++  ++ ++
          1000.+             +++ +   ++        +
               :                 +      +++  +   +          +
               :               +                          +
               :                          +     ++
             0.+--------+--------+--------+--------+--------+
              -2.       0.       2.       4.       6.       8.

                 +   COND



#FIT LINE TO CURVE 1 OF COND_Q_LOG_ALL <GO>
THE EQUATION OF THE BEST FIT IS:
        -112.162*X +1509.07


DO YOU WANT TO COMPUTE GOODNESS-OF-FIT STATISTICS? Y <GO>
DO YOU WANT TO SEE THE OBSERVED, PREDICTED, AND RESIDUAL VALUES? N <GO>

 5C X 2R PARAMETER TABLE                              07/01/83 PAGE 1

   1 PARAMETER  2 VALUE   3 STANDARD  4 T-VALUE  5 SIG. LEV.
                          DEVIATION
-------------------------------------------------------------
1  INTERCEPT    1509.07      24.8999    60.6055        0.0001
2  SLOPE        -112.162     11.7208    -9.56952       0.0001
NUMBER OF DATA POINTS = 183

 8C X 2R ANALYSIS OF VARIANCE                         07/01/83 PAGE 1

   1 SOURCE     2 SUM OF      3 D.F.  4 MEAN             5 F VALUE
               SQUARES                SQUARE
---------------------------------------------------------------
1  REGRESSION  4.991871E06         1      4.991871E06    91.5755
2  RESIDUAL    9.866487E06       181  54511.

 8C X 2R ANALYSIS OF VARIANCE                         07/01/83

   6 SIG. LEV.  7 MULT     8 STD DEV
                R-SQ       OF REGR
------------------------------------
1       0.0001  0.335964    233.476
2

DO YOU WANT TO ADD THE NEW CURVE TO YOUR GRAPH? N <GO>
Do you want to save the ANOVA table? N <GO>
Do you want to save the Parameter table? N <GO>
Do you want to save the Residuals table? N <GO>
#
```